Oregon
John A. Kitzhaber, M.D., Governor

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JUN 10 2002

FORT JAMES OPERATING CO
92326 TAYLORVILLE RD
CLATSKANIE OR 97016

ENF/COMPL
TV ACTIVITY
MACT
OTHER

RE: ISSUANCE OF OREGON TITLE V OPERATING PERMIT # **04-0041**

The Department of Environmental Quality has completed processing your Oregon Title V Operating Permit renewal application and has issued the enclosed permit. This permit became effective when the Regional Air Quality Manager signed it. If you wish to appeal any of the conditions or limitations contained in the attached permit or if you have any questions, please contact George Davis at (503) 229-5534. If issues related to the permit conditions cannot be resolved to your satisfaction, you may request a hearing before the Environmental Quality Commission or its authorized representative. Any such requests shall be made in writing within 20 days of the date of this letter, and shall clearly specify which permit conditions are being challenged and why, including each alleged factual or legal objection. Permit conditions not contested shall be in effect upon the date the permit was signed (OAR 340-218-0220).

You are urged to carefully read the permit and take all possible steps to ensure compliance with the conditions established.

Sincerely,

Ed Druback
Air Quality Manager
Northwest Region

EJD:jdb

Enclosure

Cc: DEQ, Air Quality Division
EPA Region X
George Davis/NWR

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
OREGON TITLE V OPERATING PERMIT

PART 1 OF 2

Northwest Region
2020 S.W. 4th Avenue, #400
Portland, OR 97201-4987
Telephone: (503) 229-5263

Issued in accordance with the provisions of
ORS 468A.040, 468A.300 and based on the land use compatibility findings included in the permit record.

ADMINISTRATIVE INFORMATION

ISSUED TO:

Fort James Operating Company
92326 Taylorville Road
Clatskanie, OR 97016

INFORMATION RELIED UPON:

Application Number: 017185
Received: 10/01/98

Formerly issued to: Fort James Operating Company

PLANT SITE LOCATION:

92326 Taylorville Road
Clatskanie, Oregon

LAND USE COMPATIBILITY STATEMENT:

From: Clatsop County Planning Department
Dated: 10/08/93

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Ed Druback

JUN 10 2002

Ed Druback, Northwest Region Air Quality Manager — Date

Nature of Business: Kraft Pulp Mill
Primary SIC: 2621
Other SICs: 4593, 4961

RESPONSIBLE OFFICIAL:

Name: Richard P. Wenger
Title: Vice President/Mill Manager

FACILITY CONTACT PERSON

Name: Mike Crawford
Title: Environmental Engineer
Phone: (503) 455-3233

This permit is comprised of 2 Parts.
Part 1 of this permit contains all applicable requirements, other than the National Emission Standard for Hazardous Air Pollutants for the Pulp and Paper Industry, as well as General Conditions and other generally applicable information.
Part 2 of this permit contains the applicable requirements of the National Emission Standard for Hazardous Air Pollutants for the Pulp and Paper Industry.

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LIST OF ABBREVIATIONS USED IN THIS PERMIT

ADBT	air dried bleached tons
ADT	air dried tons
ADTP	air dried tons of pulp
ADUT	air dried unbleached tons
ASTM	American Society of Testing and Materials
BDT	bone dry tons
BLS	black liquor solids
CE	combustion efficiency
CEMS	continuous emissions monitoring system
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
COMS	continuous opacity monitoring system
CPUD	Clatskanie People's Utility District
DEQ	Oregon Department of Environmental Quality
dscf	dry standard cubic foot
dscfm	dry standard cubic feet per minute
EAL	emission action level
EF	emission factor
EPA	US Environmental Protection Agency
ESP	electrostatic precipitator
EU	emissions unit
EWEB	Eugene Water & Electric Board
FBB	fluid bed boiler
FCAA	Federal Clean Air Act
gpm	gallons per minute
gr/dscf	grain per dry standard cubic foot
HAP	hazardous air pollutant as defined by OAR 340-244-0040
HCFC	hydro chloro-fluoro-carbons
ID	identification number
I&M	inspection and maintenance
MB	material balance
MDTP	machine dried tons of paper or pulp
MM	million
MMBtu	million British thermal units
mvac	motor vehicle air conditioner
MW	megawatt
NCASI	National Council of the Paper Industry for Air and Stream Improvement, Inc.
NCG	non-condensible gases
NG	natural gas
NO_x	oxides of nitrogen
O_2	oxygen
OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
O&M	operation and maintenance
Pb	lead
PCD	pollution control device
PM	particulate matter
PM_{10}	particulate mater less than 10 microns in size
ppm	part per million
ppmv	part per million by volume
ppmdv	part per million by dry volume
PSEL	Plant Site Emission Limit
QA	quality assurance
QAP	Quality Assurance Plan
QC	quality control
RMP	refiner mechanical pulp
RPF	residual paper fuel
scf	standard cubic foot
scfm	standard cubic feet per minute
SERP	Source Emission Reduction Plan
SIC	Standard Industrial Code
SO_2	sulfur dioxide
ST	source test
TBD	to be determined
TDF	tire-derived fuel
TRS	total reduced sulfur
VE	visible emissions
VOC	volatile organic compound
WAS	waste activated sludge

PERMITTED ACTIVITIES

1. Until such time as this permit expires or is modified or revoked, the permittee is allowed to discharge air contaminants from those processes and activities directly related to or associated with air contaminant source(s) in accordance with the requirements, limitations, and conditions of this permit. [OAR 340-218-0010 and 340-218-0120(2)]

2. All conditions in this permit are federally enforceable and state enforceable except as noted below:

   2.a. Conditions 12, 13 and G21 are enforceable by the state only.

   2.b. Conditions 21, 22.e, 22.g.vi, 41, 42, 43, 44, 52, 54.b, 57.a, 78, , 78, and 104 are currently enforceable by the state only but will become federally enforceable upon the EPA approval of proposed revisions to the Oregon State Implementation Plan (SIP).

   2.c. Conditions 16, 17, 18, 19, 30, 31, 32, 33, 46, 47.b, 55, 56 and 148 are currently enforceable by the state only but will become federally enforceable upon the EPA approval of proposed revisions to the Oregon Plan for the Control of Designated Pollutants From Existing Facilities (Section 111 (d) Plan).

   2.d. The Total Reduced Sulfur (TRS) PSELs in condition 149 are currently enforceable by the state only but will become federally enforceable upon the EPA approval of proposed revisions to the Oregon Plan for the Control of Designated Pollutants From Existing Facilities (Section 111(d) Plan).

EMISSIONS UNIT (EU) AND POLLUTION CONTROL DEVICE (PCD) IDENTIFICATION

3. The emissions units regulated by this permit are listed in below in abbreviated form. For the complete listing of emissions units and emissions points, see page 86. [OAR 340-218-0040(3)]

EU Quick Reference List – See page 86 for complete list

EU02...Brownstock Washer Hood Vent DP331

EU06...Bleach Plant Misc. Vents

EU07...Bleach Plant DP356

EU16...Groundwood Mill

EU21...Lime Kiln DP372

EU23...NCG Incinerator DP375

EU24...Recovery Furnace DP808, DP809

EU25...Smelt Dissolving Tank DP803

EU28...Black Liquor Storage and Process Vents

EU33...Power Boiler DP831

EU34...Package Boiler DP842

EU35...Fluid Bed Boiler DP832

EU36...Screw Press Boiler DP833

EU37a... Limestone Daybin DP835; Ash Silo Transfer Receiver DP836; Saltcake Silo and Day Bin DP806;

EU38...#2 PM Winders DP408; #1 PM Winders DP410; #5 PM Calendar Stack/Reel DP606

EU38a... Slaker Vent DP368; Lime Tank Cyclone DP376

EU39...Towel and Tissue Machine, Fuel Burning Sources

EU40...Towel and Tissue Machines, Non-Fuel Burning Vents; DP601, DP602, DP604

EU41...Communications Paper Machine Vents

EU42...Pulp Dryer

EU43...Fugitive Particulate Emissions, Roads and Parking Lots

EU44...Chip and Bark Storage Piles

EU47...Fugitive Chip Unloading

EU50...Chip Screen Room

EU51...Chip Storage Silo Material Handling

EU52...Kraft/Groundwood Silo Material Handling

EU53...Wastewater Treatment System

EU54...Process Chemicals VOC Emissions

...AGGREGATE INSIGNIFICANT EMISSIONS UNITS

EU03...Weak Liquor Tanks #1, #2, Brownstock Filtrate Tanks

...Weak Liquor Tank #1 DP310; Weak Liquor Tank #2 DP311; Weak Liquor Tank #3 DP322; Kamyr 1st Stage Filtrate Tank DP391; Kamyr 2nd Stage Filtrate Tank DP392; Kamyr Rewash Filtrate Tank DP393; M&D 1st Stage Filtrate Tank DP394 ; M&D 2nd Stage Filtrate Tank DP398; M&D Rewash Filtrate Tank DP399;

EU20...Recaust Plant Tanks

...Green Liquor Clarifier DP362; Green Liquor Storage DP363; Spare Dump Tank DP364; Lime Slaker Vent DP368; #1 Causticizer DP365; #2 Causticizer DP366; #3 Causticizer DP367; #1 White Liquor Clarifier DP369; #2 White Liquor Clarifier DP370; #1 Dregs Washer DP371; #2 Dregs Washer DP380; Dregs Filter Vacuum Vent DP350; Lime Mud Washer DP373; Lime Mud Storage DP374; Lime Mud Filter DP351;

EU28b... Strong Liquor Storage Tank #1 DP816; Strong Liquor Storage Tank #2 DP817; Strong Liquor Storage Tank #3 DP818; Strong Liquor Storage Tank #4 DP820

EU37b... Ash Silo Bin DP837; Sand Silo DP838; Converting, Old Tissue #1 DP701; Converting, Old Tissue #2 DP702; Converting, Old Tissue #3 DP703; Converting, New Tissue DP705 ; Clay Transfer DP544; Clay Unloading DP545; Starch Unload System DP546;

EU15... Methanol Storage Tank DP355

EU60... Electrical generating gas turbines

EU70... Electrical generating diesel engines

END OF SECTION

FACILITY-WIDE REQUIREMENTS

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Averaging Time	Testing Condition	Monitoring Condition
340-208-0210(2)	4	fugitive dust	minimize fugitives			5
340-208-0210(2)	6	fugitive dust	minimize fugitives			7
340-228-0100	8	residual fuel oil	1.75% sulfur			9
340-228-0110(1)	8	distillate fuel oil, ASTM Grade 1	0.3% sulfur			9
340-228-0110(2)	8	distillate fuel oil, ASTM Grade 2	0.5% sulfur			9
ACDP Condition 18	10	SERP	reduce emissions			11
ACDP Condition 15	12	odors	No nuisance			14
ACDP Condition 3	13	Particulate > 250 μ	No nuisance			14
40 CFR Part 68	15	Risk Management	Risk Management Plan			n/a

4. Applicable Requirement: No person shall cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished; or any equipment to be operated, without taking reasonable precautions to prevent particulate matter from becoming airborne. [OAR 340-208-0210(2)]

5. Monitoring Requirement: At least once each calendar year, the permittee shall survey the facility for airborne particulate matter and take corrective action if necessary.

5.a. Recordkeeping: The permittee shall maintain records of airborne particulate matter surveys, which shall include the following:

5.a.i. Inspection records shall be comprised of dates and times of any visible emissions observed.

5.a.ii. Maintenance activity records shall be comprised of any preventative or corrective action taken as a result of the monthly inspections.

6. Applicable Requirement: The permittee shall minimize fugitive dust emissions by:

6.a. treating vehicular areas of the plant site under the control of the permittee; and

6.b. storing collected material from air pollution control equipment in a covered container or other method equally effective in preventing the material from becoming airborne during storage and transfer. [OAR 340-208-0210(2)].

7. Monitoring Requirement: At least once per quarter the permittee shall inspect the following areas for fugitive emissions:

7.a. vehicular areas of the plant site under the control of the permittee; and

7.b. containers or other methods used to collect material from air pollution control devices.

7.c. Recordkeeping: The permittee shall maintain a fugitive dust survey log, which shall include the following:

7.c.i. Inspection records shall be comprised of dates and times of any visible emissions surveys, as well as the results of the surveys.

7.c.ii. Records of any preventative or corrective action taken as a result of the quarterly inspections.

8. Applicable Requirement: The permittee shall not use any fuel oil containing more than the following amounts of sulfur:

8.a. Residual fuel oil containing more than 1.75 percent sulfur by weight [OAR 340-228-0100];

8.b. ASTM Grade 1 distillate fuel oil containing more than 0.3 percent sulfur by weight [OAR 340-228-0110(1)]; or

8.c. ASTM Grade 2 distillate fuel oil containing more than 0.5 percent sulfur by weight [OAR 340-228-0110(2)].

9. Monitoring Requirement: The permittee shall monitor the sulfur content of each batch (e.g., barge, truck load, etc.) of fuel oil received by:

9.a. obtaining a sulfur analysis certificate from the vendor for each batch; or

9.b. analyzing or having analyzed by a contract laboratory a monthly composite of representative samples taken by the permittee from each batch of fuel received.

9.c. Liquid fuels shall be analyzed using ASTM D129-64, D1552-83, or D4057-81 or the current equivalent method(s).

9.d. Recordkeeping: The permittee shall maintain records of sulfur analysis certificates and/or sulfur analysis results.

10. Applicable Requirement: In the event an Air Pollution Alert, Warning, or Emergency Episode is declared in the Westport or Clatskanie area by the Department, the permittee shall take the action appropriate to the episode condition as required by OAR 340-206-0050, and as described below. The permittee shall take such action when the permittee first becomes aware of such a declaration whether through news media, direct contact with the Department, or from other sources.

10.a. ALERT: Prepare to curtail combustion of oil or solid fuels.

10.b. WARNING: Reduce oil/solid fuel combustion.

10.c. EMERGENCY: Cease burning oil or solid fuel.

During an applicable Air Pollution Episode, the Source Emission Reduction Plan (SERP) shall be available on the source premises for inspection by Department personnel. [01/18/94 ACDP 04-0004, condition 18] [OAR 340-206-0050]

11. Monitoring Requirement: The permittee shall record air pollution episodes and emissions reduction actions taken.

11.a. Recordkeeping: The Permittee shall maintain records of air pollution episodes and emissions reduction actions taken.

12. Applicable Requirement: The permittee shall not allow the emission of odorous matter or other fugitive emissions so as to create nuisance conditions off the permittee's property. Nuisance conditions will be verified by Department personnel. The creation of nuisance conditions may, in addition to any other action the Department may take, result in a permit modification to require a compliance schedule to control the nuisance conditions. [01/18/94 ACDP 04-0004, condition 15] [state-only enforceable]

13. Applicable Requirement: No person shall cause or permit the emission of any particulate matter which is larger than 250 microns in size provided such particulate matter does or will deposit upon real property of another person. [01/18/94 ACDP 04-0004, condition 3] [state-only enforceable]

14. Monitoring Requirement: The permittee shall record all written complaints, or complaints received via telephone or facsimile by the responsible official or a designated appointee, that specifically refer to a complaint of odor or fugitive emissions or opacity from the permitted facility. The log shall also record permittee's actions to investigate, make a determination as to the validity of the complaint, and resolve the complaint, if possible, within two (2) working days of receiving the complaint or within such longer time (not to exceed five (5) working days) as is reasonably necessary.

14.a. Recordkeeping: The permittee shall maintain a complaint log.

15. Applicable Requirement: The permittee must comply with the risk management plan (RMP) submitted to EPA and all other applicable requirements of 40 CFR Part 68. [40 CFR Part 68]

END OF SECTION

EMISSIONS UNIT SPECIFIC LIMITATIONS - RECOVERY FURNACE (EU24)

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standards	Averaging Time	Testing Condition	Monitoring Condition
340-234-0210(1)(a)(A)	16	TRS	10 ppm @8% O_2 daily arithmetic average			17
340-234-0210(1)(a)(A)	18	TRS	0.30 lb/ton daily arithmetic average			19
340-234-0210(2)(a)(A)	25	PM/PM10	4.0 lb/ton daily arithmetic average		26	26
340-234-0210(2)(a)(B)	23	PM/PM10	0.13 gr/dscf @8% O_2 daily arithmetic average		24	24
340-234-0210(2)(a)(C)	20	opacity	35% 6 minute average	20		22
340-226-0120	21	opacity	25% EAL 1-hour average			22
340-234-0210(3)	27	SO2	300 ppm, non-fuel oil, 3-hour arithmetic average			28

16. Applicable Requirement: The permittee shall not cause or allow the emission of total reduced sulfur (TRS) from emissions unit EU24 in excess of 10 parts per million (ppm), corrected to 8% oxygen (O_2), as a daily arithmetic average. [OAR 340-234-0210(1)(a)(A)] [state-only enforceable pending EPA approval of Section 111 (d) Plan]

17. Monitoring Requirement: The permittee shall monitor TRS and O_2 emissions from emissions unit EU24 by calibrating, maintaining, and recording the output of continuous emissions monitoring systems (CEMS) on monitoring point DP809 in accordance with the Department's Continuous Monitoring Manual. [OAR 340-234-0240(2)(a)] [state-only enforceable pending EPA approval of Section 111 (d) Plan]

17.a. Monitoring shall be continuous using a daily averaging period. The daily arithmetic average of TRS and O_2 shall be calculated from 1-hour arithmetic averages.

17.b. The daily cumulative minutes with concentrations greater than 10 ppm shall be recorded.

17.c. Insufficient data completeness, as defined by the Department's Continuous Monitoring Manual, excluding CEMS downtime due to zero and span checks, performance audits, monthly SO_2 monitoring, and routine monitor maintenance, will void that data period.

17.d. TRS concentrations shall be corrected to 8% oxygen.

17.e. Recordkeeping: The permittee shall maintain the following records:

17.e.i. daily arithmetic average TRS concentrations (corrected to 8% oxygen);

18. Applicable Requirement: The permittee shall not cause or allow the emission of total reduced sulfur in excess of 0.30 pound/equivalent ton of pulp production from emissions unit EU24, as a daily arithmetic average. [OAR 340-234-0210(1)(a)(A)] [state-only enforceable pending EPA approval of Section 111 (d) Plan]

19. Monitoring Requirement: The permittee shall monitor total reduced sulfur emissions from emissions unit EU24 by calculating emissions in units of pounds of TRS/ton of equivalent air dried pulp production, using the daily arithmetic average TRS, air flow rate, and the daily average equivalent ADTP, as described below. [state-only enforceable pending EPA approval of Section 111 (d) Plan]

19.a. The daily arithmetic average TRS shall be obtained from the TRS CEMS.

19.b. The permittee shall caluculate the average air flow from the five most recent source tests.

19.c. The permittee shall calculate average daily equivalent ADTP production as described in Condition 29, Recovery Furnace Equivalent Pulp Production (page 15).

19.d. The TRS PSEL shall be calculated from the TRS pounds per day calculated above.

19.e. Recordkeeping: The permittee shall maintain records of the dry BLS burned per day, the daily equivalent ADTP, and the daily calculated pounds of TRS per equivalent ADTP.

20. Applicable Requirement: The emissions of particulate matter from each recovery furnace stack, DP808 and DP809, shall not exceed 35% opacity for a period or periods aggregating more than thirty (30) minutes in any one hundred eighty (180) consecutive minutes or more than sixty (60) minutes in any twenty-four (24) consecutive hours, excluding uncombined water and excluding periods when the facility is not operating. [OAR 340-234-0210(2)(a)(C)]

21. Applicable Requirement: The permittee shall take corrective action to return to highest and best practicable treatment and control upon exceeding the opacity emission action level of 25%, as an hourly average. The exceedance of an action level shall not be considered a violation of an emission limit in this permit. [OAR 340-226-0120(2)(d)] [state-only enforceable pending EPA approval of SIP]

22. Monitoring Requirement: The permittee shall monitor opacity from emissions unit EU24 by calibrating, maintaining, and recording the output of a continuous opacity monitoring system (COMS) on monitoring points DP808 and DP809 in accordance with the Department's Continuous Monitoring Manual and the following. [OAR 340-234-0240(3)(b)]

22.a. The average opacity for emissions unit EU24 shall be calculated from the individual opacities from monitoring points DP808 and DP809 and recorded for each six (6) minute block period.

22.b. The number of six-minute averages in excess of 35% during a 24-hour period shall be recorded.

22.c. The average hourly opacity shall be calculated from the six (6) minute opacities.

22.d. The average daily opacity shall be calculated from the six (6) minute opacities.

22.e. The permittee shall monitor exceedances of the emission action level for EU24 and the corrective actions taken. [state-only enforceable pending EPA approval of SIP]

22.f. Insufficient data completeness, as defined by the Department's Continuous Monitoring Manual, excluding COMS downtime due to zero and span checks, performance audits, and routine monitor maintenance, will void that data period.

22.g. Recordkeeping: The permittee shall record the following: [OAR 340-234-0240(3)(b)]

22.g.i. The average opacity for each six (6) minute block period;
22.g.ii. The number of times during each-24 hour period that the cumulative minutes with opacity in excess of 35% exceeded 30 minutes in any 180 minute period;
22.g.iii. The cumulative number of minutes with opacity in excess of 35% during a 24-hour period;
22.g.iv. The average hourly opacity;
22.g.v. The average daily opacity.
22.g.vi. Exceedances of the emission action level and the corrective actions taken. [state-only enforceable pending EPA approval of SIP]; and
22.g.vii. Hourly average opacities in excess of 25% during a 24-hour period from EU24 and the corrective action taken.

23. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in excess of 0.13 grain/dry standard cubic foot at 8% O_2 from emissions unit EU24, as a daily arithmetic average. [OAR 340-234-0210(2)(a)(B)]

24. Monitoring Requirement: Particulate matter emissions from EU 24 shall be monitored by performing source testing as follows:

24.a. Source testing shall be performed at least quarterly, except that testing may be semi-annual when the preceding six (6) source tests were less than 0.097 gr/dscf. If semi-annual source test results exceed 0.097 gr/dscf, the frequency shall revert back to quarterly. [OAR 340-234-0240(3)(d)]

24.b. Source testing shall be performed in accordance with the Source Testing and Emission Factor Verification Procedure set forth in the TEST METHODS AND PROCEDURES SECTION (page 77) of this permit and the Department-approved Quality Assurance Plan, as amended.

24.c. Particulate matter emissions shall be source tested simultaneously at monitoring points DP808 and DP809.

24.d. The source testing required in this condition shall be used to verify the emission factor for the PSEL as required in condition 154 simultaneously at monitoring points DP808 and DP809.

24.e. During each test, the permittee shall monitor the following information:

24.e.i. ESP parameters (e.g., primary and secondary voltage, etc.);
24.e.ii. average daily equivalent pulp production (ADTP), calculated in accordance with Condition 29, Recovery Furnace Equivalent Pulp Production (page 15);
24.e.iii. black liquor solids flow (gpm);
24.e.iv. average hourly opacity (%);
24.e.v. black liquor solids (%);
24.e.vi. total reduced sulfur emissions (ppm); and
24.e.vii. oxygen concentration.

24.f. EPA Method 5 shall be used to determine compliance with the particulate matter limitation for emissions unit EU24. ODEQ Method 5 shall be used for PSEL calculations.

24.g. Recordkeeping: The permittee shall record the following information for each source test:

24.g.i. the particulate matter emissions rates;
24.g.ii. ESP parameters (e.g., primary and secondary voltage, etc.);
24.g.iii. average daily equivalent pulp production (ADTP), calculated in accordance with Condition 29, Recovery Furnace Equivalent Pulp Production (page 15);
24.g.iv. black liquor solids flow (gpm);
24.g.v. average hourly opacity (%);
24.g.vi. black liquor solids (%);
24.g.vii. total reduced sulfur emissions (ppm); and
24.g.viii. oxygen concentration.

25. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in excess of 4.0 pounds/equivalent ton of pulp production from emissions unit EU24, as a daily arithmetic average. [OAR 340-234-0210(2)(a)(A)]

26. Monitoring Requirement: The permittee shall monitor emissions of particulate matter in pounds per ton of equivalent pulp production from EU24, using the daily calculated particulate matter emissions and opacity, as described below.

26.a. The permittee shall develop opacity/loading correlations between opacity and particulate matter grains/dscf using results from the source test, in grains per dry standard cubic foot, required by condition 24, and the hourly average opacity for the same source test period required by condition 22. Equations shall be developed to define the opacity/loading correlations and shall be based on at least the 5 most recent source tests and shall be revised after each source test.

26.a.i. The equation based on EPA Method 5 shall be included in that month's report along with the correlation coefficient, r.

26.a.ii. The equation based on DEQ Method 5 shall be used for PSEL calculations.

26.b. The permittee shall calculate the average air flow from the five most recent source tests.

26.c. The permittee shall calculate average daily equivalent ADTP production as described in Condition 29, Recovery Furnace Equivalent Pulp Production (page 15).

26.d. The permittee shall calculate the daily average pounds of particulate matter per equivalent ton of pulp produced in accordance with the following:

26.d.i. Use the average daily opacity with the opacity/loading correlation to calculate the particulate matter emissions, grains per dry standard cubic foot.

26.d.ii. Multiply the average air flow and the particulate matter emissions calculated above to obtain pounds of particulate/day.

26.d.iii. Divide the pounds of particulate/day by the average daily equivalent pulp production (ADTP) as calculated above to obtain daily average pounds of particulate matter per equivalent ton of pulp.

26.e. EPA Method 5 shall be used to determine compliance with the particulate matter limitation for emissions unit EU24.

26.f. Recordkeeping: The permittee shall record the following:

26.f.i. The three-month rolling ADTP production per ton of dry BLS;

26.f.ii. The tons of dry BLS burned per day;

26.f.iii. The daily equivalent ADTP production;

26.f.iv. The daily particulate matter emissions, grains per dry standard cubic foot; and

26.f.v. The daily average pounds of particulate matter per equivalent ton of pulp produced.

27. Applicable Requirement: The permittee shall not cause or allow the emission of sulfur dioxide in excess of 300 parts per million by volume, as a three-hour average, from emissions unit EU24, except when burning fuel oil. [OAR 340-234-0210(3)]

28. Monitoring Requirement: The permittee shall monitor sulfur dioxide emissions monthly from emissions unit EU24 when not burning fuel oil by using the TRS CEMS at

monitoring points DP809. Continuous TRS monitoring may be suspended during the SO_2 monitoring.

28.a. Sulfur dioxide monitoring shall be done in accordance with the Department's Continuous Monitoring Manual.

28.b. The three-hour average concentration shall be calculated from one-hour arithmetic averages. [OAR 340-234-0240(3)(b)]

28.c. Recordkeeping: The permittee shall record the three hour average concentrations of sulfur dioxide.

RECOVERY FURNACE EQUIVALENT PULP PRODUCTION

29. The permittee shall calculate average daily equivalent ADTP production for the recovery furnace (RECOVERY FURNACE EQUIVALENT PULP PRODUCTION) for each day in accordance with the following:

29.a. Calculate a three-month rolling ADTP production per ton of dry BLS burned by recording the pulp production and the amount of BLS burned on a monthly basis, updating the ratio each month.

29.b. If the pulping liquor formulation changes significantly, a new ratio of ADTP production per ton of dry BLS burned shall be developed.

29.c. Monitor the tons of dry BLS burned per day.

29.d. Multiply the amount of dry BLS burned per day by the ratio of ADTP production per ton of dry BLS burned to obtain the average daily equivalent ADTP production.

END OF SECTION

EMISSIONS UNIT SPECIFIC LIMITATIONS - LIME KILN (EU21)

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standards	Averaging Time	Testing Condition	Monitoring Condition
340-234-0210(1)(b)	30	TRS	20 ppm @ 10% O_2 daily arithmetic average			32
340-234-0210(1)(b)	31	TRS	0.10 lb/ton daily arithmetic average			33
340-234-0210(1)(d)	34	non-condensible gases	controlled	34		35
340-234-0210(2)(b)(A)	36	PM/PM_{10}	1.00 lb/ton daily arithmetic average		38	38
340-234-0210(2)(b)(B)	37	PM/PM_{10}	0.20 gr/dscf @10% O_2 daily arithmetic average		38	38
340-234-0210(4)	39	opacity	20% 3 minutes in 60 minutes			40
340-226-0120	41	scrubber pressure drop	≥ 20 inches EAL 1-hour average			42
340-226-0120	43	flow rate	≥ 750 gpm EAL 1-hour average			44

30. Applicable Requirement: The permittee shall not cause or allow the emission of total reduced sulfur in excess of 20 parts per million (ppm), corrected to 10% oxygen, from emissions unit EU21, as a daily arithmetic average. [OAR 340-234-0210(1)(b)] [state-only enforceable pending EPA approval of Section 111 (d) Plan]

31. Applicable Requirement: The permittee shall not cause or allow the emission of total reduced sulfur in excess of 0.10 pound/equivalent ton of pulp production from emissions unit EU21, as a daily arithmetic average. [OAR 340-234-0210(1)(b)] [state-only enforceable pending EPA approval of Section 111 (d) Plan]

32. Monitoring Requirement: The permittee shall monitor total reduced sulfur emissions from emissions unit EU21 by calibrating, maintaining, and recording the output of a CEMS on monitoring point DP372 in accordance with the Department's Continuous Monitoring Manual. [OAR 340-234-0240(2)(a)] [state-only enforceable pending EPA approval of Section 111 (d) Plan]

32.a. Monitoring shall be continuous using a daily averaging period. The daily arithmetic average shall be calculated from 1-hour arithmetic averages.

32.b. Insufficient data completeness, as defined by the Department's Continuous Monitoring Manual, excluding CEMS downtime due to zero and span checks, performance audits, and routine monitor maintenance, will void that data period.

32.c. The permittee shall monitor the percent oxygen in the exhaust gases from emissions unit EU21 by calibrating, maintaining, and recording the output of an oxygen CEMS on monitoring point DP372 in accordance with the Department's Continuous Monitoring Manual.

32.d. TRS concentrations shall be corrected to 10% oxygen.

32.e. Recordkeeping: The permittee shall record the following:

32.e.i. TRS daily averages, uncorrected;
32.e.ii. TRS daily averages, corrected;

33. Monitoring Requirement: The permittee shall monitor total reduced sulfur (TRS) emissions from emissions unit EU21 by calculating emissions in units of pounds of TRS/ton of equivalent air dried pulp production as described below. [state-only enforceable pending EPA approval of Section 111 (d) Plan]

33.a. The permittee shall calculate emissions of total reduced sulfur by using the daily arithmetic average obtained from the TRS CEMS in condition 32; the air flow correlation as required below; and the average daily equivalent ADTP production as required below.

33.b. The permittee shall caluculate the average air flow from the five most recent source tests.

33.c. The permittee shall calculate average daily equivalent ADTP production as described in Condition 45, Lime Kiln Equivalent Pulp Production (page 20).

33.d. Recordkeeping: The permittee shall record the following:

33.d.i. Daily amount of lime mud burned, in dry tons/day;
33.d.ii. Daily equivalent pulp production, in ADTP;
33.d.iii. Daily calculated TRS emissions, lb/ton equivalent ADTP

34. Applicable Requirement: Non-condensible gases from the M&D ESCO valve vent (DP308), M&D blow tank (DP301), M&D foam tank (DP270), Kamyr low-pressure feeder (DP314), Kamyr blow tank (DP312), Kamyr foam tank (DP271), Kamyr liquor flash tanks (DP303, DP309), blow heat condensers (DP272), multi-effect evaporator hotwells (DP815), and liquor concentrator hotwells (DP825) shall be continuously treated as follows: [340-234-0210(1)(d)]

34.a. Non-condensible gases shall be continuously incinerated in either the lime kiln EU21 or the backup thermal incinerator EU23;

34.b. Venting (bypassing) of non-condensible gases shall be minimized but in no case shall the time exceed one hour.

35. Monitoring Requirement: The permittee shall monitor the date, time and duration of all periods of non-condensible gas bypass.

35.a. Recordkeeping: The permittee shall maintain the following records:

35.a.i. The date, time and duration of all periods of non-condensible venting;

35.a.ii. If a venting period exceeds 60 minutes, the permittee shall record the date, time and duration, as well as the reason(s) for venting.

36. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in excess of 1.00 pound/equivalent ton of pulp production from emissions unit EU21, as a daily arithmetic average. [OAR 340-234-0210(2)(b)(A)]

37. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in excess of 0.20 grain/dry standard cubic at 10% O_2 foot from emissions unit EU21, as a daily arithmetic average. [OAR 340-234-0210(2)(b)(B)]

38. Monitoring Requirement: The permittee shall conduct source tests for particulate matter at least semi-annually in accordance with the following: [OAR 340-234-0240(3)(e)]

38.a. Source testing shall be performed in accordance with the Source Testing and Emission Factor Verification Procedure set forth in the TEST METHODS AND PROCEDURES SECTION (page 77) of this permit and the Department-approved Quality Assurance Plan, as amended.

38.b. EPA Method 5 shall be used for measuring particulate matter emissions pertaining to conditions 36 and 37.

38.c. DEQ Method 5 shall be used to verify the emission factor for the PSEL

38.d. During each test, the permittee shall monitor the following information:

38.d.i. average daily equivalent pulp production (ADTP), lime mud burned, oxygen concentration;

38.d.ii. average daily equivalent pulp production (ADTP) shall be calculated in accordance with Lime Kiln Equivalent Pulp Production (Condition 45); and

38.d.iii. venturi scrubber operating parameters.

38.e. Recordkeeping The permittee shall record the following information for each source test:

38.e.i. the particulate matter emissions rates;
38.e.ii. average daily equivalent pulp production (ADTP), lime mud burned, oxygen concentration;
38.e.iii. average daily equivalent pulp production (ADTP) shall be calculated in accordance with Lime Kiln Equivalent Pulp Production (Condition 45); and
38.e.iv. venturi scrubber operating parameters.

39. Applicable Requirement: The permittee shall not cause or allow the emissions of any air contaminant into the atmosphere from emissions unit EU21, for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 20% opacity, excluding uncombined water. [OAR 340-234-0210(4)]

40. Monitoring Requirement: Due to the difficulty of directly monitoring the opacity of the lime kiln EU21 exhaust caused by the large amount of uncombined water in the exhaust, opacity shall be monitored as in conditions 42 and 44.

41. Applicable Requirement: The permittee shall take corrective action to return to highest and best practicable treatment and control if the lime kiln venturi scrubber (PCD CD372) pressure drop falls below 20 inches of water, as an hourly average. The exceedance of an action level shall not be considered a violation of an emission limit in this permit. [OAR 340-226-0120(2)(d)] [state-only enforceable pending EPA approval of SIP]

42. Monitoring Requirement: The permittee shall continuously monitor the pressure drop across the lime kiln venturi scrubber, PCD CD372. The permittee shall operate the pressure drop monitor in accordance with the manufacturer's written instructions. [state-only enforceable pending EPA approval of SIP]

42.a. The permittee shall monitor the pressure drop as an hourly arithmetic average.

42.b. The permittee shall also monitor exceedances of the scrubber pressure drop emission action level for PCD CD372 and the corrective actions taken.

42.c. Recordkeeping: The permittee shall record the following:

42.c.i. The permittee shall record the hourly arithmetic average scrubber pressure drop.
42.c.ii. The permittee shall record exceedances of the scrubber pressure drop emission action level for PCD CD372 and the corrective actions taken.

43. Applicable Requirement: The permittee shall take corrective action to return to highest and best practicable treatment and control if the lime kiln venturi scrubber (PCD CD372) solution flow drops below 750 gpm, as an hourly average. The exceedance of an action level shall not be considered a violation of an emission limit in this permit. [OAR 340-226-0120(2)(d)] [state-only enforceable pending EPA approval of SIP]

44. Monitoring Requirement: The permittee shall continuously monitor the flow rate of the lime kiln venturi scrubber, PCD CD372. The permittee shall operate the flow rate monitor in accordance with the manufacturer's written instructions. [state-only enforceable pending EPA approval of SIP]

44.a. The permittee shall monitor the scrubber solution flow as an hourly arithmetic average.

44.b. The permittee shall monitor exceedances of the flow rate emission action level for PCD CD372 and the corrective actions taken.

44.c. Recordkeeping: The permittee shall record the following:

44.c.i. The permittee shall record the hourly arithmetic average scrubber solution flow.

44.c.ii. The permittee shall record exceedances of the flow rate emission action level and the corrective actions taken.

LIME KILN EQUIVALENT PULP PRODUCTION

45. The permittee shall calculate average daily equivalent ADTP production for the lime kiln (LIME KILN EQUIVALENT PULP PRODUCTION) for each day in accordance with the following:

45.a. Calculate a rolling ADTP production per amount of lime mud burned by recording the pulp production and the amount of lime mud burned on a monthly basis, using a 3 month rolling average, updating the rolling average each month.

45.b. Monitor the amount of dry lime mud burned per day.

45.c. Multiply the amount of dry lime mud burned per day by the ratio of ADTP production per amount of lime mud burned to obtain the average daily equivalent ADTP production.

END OF SECTION

EMISSIONS UNIT SPECIFIC LIMITATIONS - SMELT DISSOLVING TANK VENT (EU25)

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standards	Averaging Time	Testing Condition	Monitoring Condition
340-234-0210(1)(c)(A)	46	TRS	0.033 lb/ton BLS daily arithmetic average		47	47
340-234-0210(2)(c)(A)	48	PM/PM_{10}	0.50 lb/ton daily arithmetic average		49	49
340-234-0210(4)	50	opacity	20% 3 minutes in 60 minutes			51
340-226-0120	52	control device total liquid flow rate	140 gpm EAL 1-hour average			54

46. Applicable Requirement: The permittee shall not cause or allow the emission of total reduced sulfur in excess of 0.033 pound/ton black liquor solids from emissions unit EU25, as a daily arithmetic average. [OAR 340-234-0210(1)(c)(A)] [state-only enforceable pending EPA approval of Section 111 (d) Plan]

47. Monitoring Requirement: The following procedures and test methods shall be used for monitoring TRS from emissions unit EU25 at monitoring point DP803:

47.a. Source testing shall be performed in accordance with the Source Testing and Emission Factor Verification Procedure set forth in the TEST METHODS AND PROCEDURES SECTION of this permit and the Department-approved Quality Assurance Plan, as amended.

47.b. Testing shall be at least quarterly, except that testing may be semi-annual when the preceding six (6) source test results were less than 0.025 pound/ton black liquor solids. If semi-annual source test results exceed 0.025 pound/ton black liquor solids, the frequency shall revert back to quarterly. [OAR 340-234-0240(2)(d)] [state-only enforceable pending EPA approval of Section 111 (d) Plan]

47.c. The test method shall be EPA Methods 16, 16A, 16B or a 16A/6C hybrid.

47.c.i. For Method 16A, the average emissions are calculated from nine (9) 1-hour test or three (3) 3-hour test results.

47.c.ii. For the Method 16A/6C hybrid, the average emissions are calculated from three (3) 1-hour test results.

47.d. Recordkeeping: During each test, the permittee shall record the following information:

47.d.i. black liquor solids flow (gpm), black liquor solids (%), total reduced sulfur emissions, control device operating parameters.

48. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in excess of 0.50 pound/equivalent ton of pulp production from emissions unit EU25, as a daily arithmetic average. [OAR 340-234-0210(2)(c)(A)]

49. Monitoring Requirement: The following procedures and test methods shall be used for monitoring particulate matter from emissions unit EU25 at monitoring point DP803:

49.a. Source testing shall be performed in accordance with the Source Testing and Emission Factor Verification Procedure set forth in the TEST METHODS AND PROCEDURES SECTION of this permit and the Department-approved Quality Assurance Plan, as amended.

49.b. Testing shall be at least quarterly, except that testing may be semi-annual when the preceding six (6) source tests were less than 0.375 pound /equivalent ton of pulp production. If semi-annual source test results exceed 0.375 pound equivalent ton of pulp production, the frequency shall revert back to quarterly. [OAR 340-234-0240(3)(f)]

49.c. The permittee shall calculate average daily equivalent ADTP production as described in Condition 29, Recovery Furnace Equivalent Pulp Production.

49.d. The permittee shall calculate emissions of particulate matter in units of pounds per ton of equivalent air dried pulp production by using the arithmetic average concentration and the air flow rate obtained from the source test data and the daily average equivalent ADTP production above.

49.e. The following test methods shall be used:

49.e.i. EPA Method 5 shall be used to show compliance with the pound/equivalent ton of pulp production limit. [OAR 340-234-0240(3)(f)]

49.e.ii. DEQ Method 5 shall be used to verify the emission factor.

49.f. Recordkeeping: During each test, the permittee shall record the following information:

49.f.i. average daily equivalent pulp production (ADTP), black liquor solids flow (gpm), black liquor solids (%),particulate matter emissions;

49.f.ii. average daily equivalent pulp production (ADTP) shall be calculated in accordance with condition 29; and

49.f.iii. control device operating parameters.

50. Applicable Requirement: The permittee shall not cause or allow the emissions of any air contaminant into the atmosphere from emissions unit EU25, for a period or periods

aggregating more than three minutes in any one hour which is equal to or greater than 20% opacity, excluding uncombined water. [OAR 340-234-0210(4)]

51. Monitoring Requirement: Due to the difficulty of directly monitoring the opacity of the smelt dissolving tank vent EU25 exhaust caused by the large amount of uncombined water in the exhaust, opacity shall be monitored as in condition 54.

52. Applicable Requirement: The permittee shall take corrective action to return to highest and best practicable treatment and control if the smelt dissolving tank control device (PCD CD803) total liquid flow drops below 140 gpm, as an hourly average. The exceedance from an action level shall not be considered a violation of an emission limit in this permit. [OAR 340-226-0120(2)(d)] [state-only enforceable pending EPA approval of SIP]

53. (Reserved)

54. Monitoring Requirement: The permittee shall continuously monitor the irrigation solution flow to the smelt dissolving tank control device. The permittee shall operate the flow monitor in accordance with the manufacturer's written instructions.

54.a. The permittee shall monitor the control device solution flow as an hourly arithmetic average from the continuous parameter monitoring system data.

54.b. The permittee shall also monitor and record exceedances of the emission action level and the corrective actions taken, recorded in a maintenance log. [state-only enforceable pending EPA approval of SIP]

54.c. Recordkeeping: The permittee shall record the following:

54.c.i. The permittee shall record the hourly arithmetic average control device solution flow.

54.c.ii. The permittee shall record exceedances of the control device solution flow emission action level and the corrective actions taken.

END OF SECTION

EMISSIONS UNIT SPECIFIC LIMITATIONS - MISCELLANEOUS TRS EMISSIONS UNITS

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standards	Averaging Time	Testing Condition	Monitoring Condition
340-234-0210(1)(e)(A)	55	TRS	0.156 lb/ton daily arithmetic average		56	56
340-226-0120	57	ClO_2 flow	EAL See condition 57			58
340-234-0210(4)	59	opacity	20% 3 minutes in 60 minutes			60

55. Applicable Requirement: The permittee shall not cause or allow the emission of total reduced sulfur in excess of 0.156 pound/ton of production from "other sources", excluding lime kilns, recovery furnaces, smelt dissolving tank vents, and including the sources listed below, as a daily arithmetic average. [OAR 340-234-0210(1)(e)(A)] [state-only enforceable pending EPA approval of Section 111 (d) Plan]

EU ID	Monitoring Point ID	Device/Process Name
EU02	DP331	Brownstock Washer Hood Vent
		Kamyr Knotters (1)
		Kamyr Brownstock Washers (2)
		Kamyr Brownstock Rewasher (1)
		M&D Knotters (1)
		M&D Brownstock Washers (2)
		M&D Brownstock Rewasher (1)
		Bleach Plant Washers (2)
EU28	DP821	Heavy Liquor Storage Tank #2

56. Monitoring Requirement: The following procedures and test methods shall be used annually for monitoring from emissions units EU02 at monitoring point DP331, and EU28 at monitoring point DP821. [state-only enforceable pending EPA approval of Section 111 (d) Plan]

56.a. Source testing shall be performed in accordance with the Source Testing and Emission Factor Verification Procedure set forth in the TEST METHODS AND PROCEDURES SECTION of this permit and the Department-approved Quality Assurance Plan, as amended.

56.b. Successive annual source tests shall be at least six (6) months apart.

56.c. If sample bags are used, triplicate TRS samples shall be collected. The collection system shall consist of a sample probe, citrate scrubber solution (Method 16A), pump, and sample bag. Each sample shall be collected over a minimum twenty minute period, unless a shorter time is necessary due to process operations.

56.d. The samples shall be analyzed either by a TRS analyzer, calibrated and operated in accordance with Method 6C or the TRS may be thermally oxidized to SO_2 (Method 16A) and analyzed in accordance with Method 6C. The samples shall be analyzed within four (4) hours of collecting the samples.

56.e. Method 2 shall be used to measure the volumetric flow rate of the miscellaneous source exhaust gases concurrently with the collection of the TRS samples. If Method 2 cannot be used on a source due to extremely low velocity pressures, high moisture, or unacceptable sample duct configurations, the permittee may use a hot wire or vane anemometer to measure the velocity of the exhaust gases. When using procedures other than Method 2, the permittee shall calibrate and operate the instrumentation in accordance with the manufacturer's written instructions.

56.f. The permittee shall calculate average daily equivalent ADTP production (for EU28 only) as described in Condition 29, Recovery Furnace Equivalent Pulp Production.

56.g. Recordkeeping: During each test, the permittee shall record the following information:

56.g.i. average daily kraft pulp production, average daily equivalent pulp production (ADTP), black liquor solids flow (gpm), black liquor solids (%), total reduced sulfur emissions (ppm), chlorine dioxide solution flow rate to the washer hood vents (gpm);

56.g.ii. miscellaneous TRS source operating conditions (e.g., tank filling/emptying, static condition, etc.).

57. Applicable Requirement: The permittee shall take corrective action to return to highest and best practicable treatment and control if the application rate of chlorine dioxide used to control TRS emissions from the washer hood vents (EU02) falls below the value of Y (calculated below) as an hourly average.

Y = 0.0005 * (X), where
Y = gallons of chlorine dioxide per minute
X = air dried tons of unbleached pulp per day.

57.a. The exceedance from an action level shall not be considered a violation of an emission limit in this permit. [OAR 340-226-0120(2)(d)] [state-only enforceable pending EPA approval of SIP]

57.b. This permit Condition shall become null and void if and when the washer hood vents, emissions unit EU02, are connected to an emissions control system that complies with the HVLC control requirements in 40 CFR Part 63, Subpart S.

58. Monitoring Requirement: The permittee shall conduct the following monitoring with respect to the highest and best practicable treatment and control of TRS emissions from the washer hood vents, emissions unit EU02, as follows:

58.a. The permittee shall monitor the pulp production rate as a 1-hour block average.
58.b. The permittee shall calculate the minimum chlorine dioxide application rate based on the hourly average pulp production rate.
58.c. The permittee shall monitor the actual chlorine dioxide application rate as a 1-hour block average.
58.d. Monitoring devices shall be operated in accordance with the manufacturer's written instructions.

58.e. Recordkeeping: The permittee shall record the following:

58.e.i. The permittee shall monitor the pulp production rate as a 1-hour block average.
58.e.ii. The permittee shall calculate the minimum chlorine dioxide application rate based on the hourly average pulp production rate.
58.e.iii. The permittee shall monitor the actual chlorine dioxide application rate as a 1-hour block average.
58.e.iv. Monitoring devices shall be operated in accordance with the manufacturer's written instructions.
58.e.v. The permittee shall record exceedances of the flow rate emission action level and the corrective actions taken.

58.f. This permit Condition shall become null and void if and when the washer hood vents, emissions unit EU02, are connected to an emissions control system that complies with the HVLC control requirements in 40 CFR Part 63, Subpart S.

59. Applicable Requirement: The permittee shall not cause or allow the emissions of any air contaminant into the atmosphere from emissions units EU02 and EU28, for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 20% opacity, excluding uncombined water. [OAR 340-234-0210(4)]

60. Monitoring Requirement: Once during each semi-annual reporting period, the permittee shall monitor the miscellaneous TRS sources, emissions units EU02 at monitoring point DP331, and EU28 at monitoring point DP821, using the Visible Emissions Monitoring Procedure in Condition 157.

60.a. Recordkeeping: The permittee shall record the opacity monitoring results.

END OF SECTION

EMISSIONS UNIT SPECIFIC LIMITATIONS – POWER BOILER (EU33) AND PACKAGE BOILER (EU34)

EU ID	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standards	Averaging Time	Testing Condition	Monitoring Condition
EU33	340-208-0110(1)(b)	61	opacity	40% 3 minutes in 60 minutes			62
	340-228-0210(1)(a)	63	PM/PM_{10}	0.2 gr/dscf 3-hour average		71	64, 71
EU34	340-208-0110(2)(b)	65	opacity	20% 3 minutes in 60 minutes			68
	340-228-0210(1)(b)	66	PM/PM_{10}	0.1 gr/dscf 3-hour average			68
	340-222-0040	67	fuel	natural gas only			68
	02/18/94 ACDP	69	oxygen	4% excess O_2 1-hour average			70

61. Applicable Requirement: The permittee shall not cause or allow the emissions of any air contaminant into the atmosphere from emissions unit EU33 for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 40% opacity, excluding uncombined water. [OAR 340-208-0110(1)(b)]

62. Monitoring Requirement: The permittee shall monitor visible emissions from emissions unit EU33 in accordance with the following:

62.a. During each period of fuel oil usage, the permittee shall use the following monitoring schedule for conducting the visible emissions surveys:

62.a.i. Within two hours of beginning a period of fuel oil usage (excluding start up periods), or as soon as possible if conditions such as inclement weather or darkness make observations impossible within two hours, the permittee shall use Method 22 to determine if visible emissions are occurring.

62.a.i.(1) If visible emissions are observed, the permittee shall take immediate corrective actions to eliminate or reduce the visible emissions, and perform the procedures in Condition 62.a.ii;

62.a.i.(2) If no visible emissions are observed, no further action is required.

62.a.ii. The permittee shall use Method 22 to determine if visible emissions are occurring within 24 hours of the initial observation;

62.a.ii.(1) If visible emissions are again observed, the permittee shall take immediate corrective actions to eliminate or reduce the visible emissions, and shall repeat this procedure each day until the requirements of Condition 62.a.ii.(2) can be accomplished; and

62.a.ii.(2) The permittee shall use Method 9 to determine compliance with the opacity limitation not later than the following weekday (Monday through Friday, excluding holidays).

62.a.iii. Once per quarter thereafter until the period of fuel oil usage ends, the permittee shall use Method 22 to determine if visible emissions are occurring.

62.a.iii.(1) If visible emissions are observed, the permittee shall take immediate corrective actions to eliminate or reduce the visible emissions, and perform the procedures in Condition 62.a.ii;
62.a.iii.(2) If no visible emissions are observed, no further action is required.

62.b. During each period of only natural gas usage, the permittee shall monitor fuel usage in lieu of conducting visible emissions observations.

62.c. Explanatory note: "Period of fuel oil usage" means a continuous time period during which fuel oil is continuously used to fuel the emissions unit, following a period during which a different fuel was used or the emissions unit was not operating. A period of fuel oil usage ends whenever the use of fuel oil ceases for any reason. Brief testing of oil guns does not constitute a period of fuel oil usage.

62.d. Recordkeeping: The permittee shall record the results of all visible emission monitoring for EU33 and all corrective actions taken.

63. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in excess of 0.2 grain per standard cubic foot from emissions units EU33, corrected to 12% CO_2 or 50% excess air, as a three-hour average. [OAR 340-228-0210(1)(a)]

64. Monitoring Requirement: The permittee shall monitor the following:

64.a. the type and amount of fuels used each day in EU33;
64.b. the number of hours per year that oil is used as a fuel, excluding brief periods of oil gun testing.

64.c. Recordkeeping: The permittee shall record the following:

64.c.i. the type and amount of fuels used each day in EU33; and
64.c.ii. the number of hours per year that oil is used as a fuel, excluding brief periods of oil gun testing.

65. Applicable Requirement: The permittee shall not cause or allow the emissions of any air contaminant into the atmosphere from emissions unit EU34 for a period or periods

aggregating more than three minutes in any one hour which is equal to or greater than 20% opacity, excluding uncombined water. [OAR 340-208-0110(2)(b)]

66. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in excess of 0.1 grain per standard cubic foot from emissions unit EU34, corrected to 12% CO_2 or 50% excess air, as a three-hour average. [OAR 340-228-0210(1)(b)]

67. Applicable Requirement: The permittee shall only burn natural gas in emissions unit EU34. [OAR 340-222-0040]

68. Monitoring Requirement: The permittee shall monitor the type and amount of fuel used each day in emissions unit EU34.

68.a. Recordkeeping: The permittee shall record the type and amount of fuels used each day in EU34.

69. Applicable Requirement: The permittee shall operate emissions unit EU34 with a minimum of 4% excess oxygen in order to minimize CO emissions. [02/18/94 ACDP 04-0004, condition 8(n)]

70. Monitoring Requirement: The permittee shall install, calibrate, maintain, and operate a continuous excess oxygen monitor in accordance with the manufacturer's written instructions for emissions unit EU34. The permittee shall calculate the excess oxygen as an hourly arithmetic average from the continuous parameter monitoring system data.

70.a. Recordkeeping: The permittee shall record the hourly average excess oxygen.

SOURCE TESTING AND EMISSION FACTOR VERIFICATION

71. Monitoring Requirement: Each calendar year that oil is used in EU33 for more than 438 hours, the permittee shall conduct a source test for emissions monitoring and emission factor verification for emissions unit EU33 at monitoring point DP831:

71.a. The tests shall be done in accordance with the Source Testing and Emission Factor Verification Procedure set forth in the TEST METHODS AND PROCEDURES SECTION of this permit

71.b. The source test shall be conducted while burning fuel oil.

71.c. The tests shall be for the following pollutant(s): particulate matter (DEQ Method 5), oxides of nitrogen (Method 7E), and carbon monoxide (Method 10).

71.d. During each source test, the permittee shall record the following:
71.d.i. fuel type; and

71.d.ii. amount used.

71.e. Source tests shall be separated by a minimum period of six (6) months.

END OF SECTION

EMISSIONS UNIT SPECIFIC LIMITATIONS - FLUID BED BOILER (EU35)

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standards	Averaging Time	Testing Condition	Monitoring Condition
340-228-0200	72	fuels	no liquid fuels			73
40 CFR 60.43b(f)	74	opacity	20% 6 minute average	6 minutes		75
40 CFR 60.43b(f)	74	opacity	27% 6 minute average	6 minutes		75
340-226-0120(2)(a)] 340-212-0200	76	opacity	10% EAL and CAM	1 hour		77
02/18/94 ACDP 04-0004, condition 9	78	PM	0.01 gr/dscf		80, 96	80, 96
40 CFR 60.43b(c)(1)	79	PM	0.10 lb/MMBtu 3-hour average	3 hours	80, 96	80, 96
340-228-0200	81	SO_2	1.6 lb/MMBtu 2-hour average	2 hours	82, 96	82, 96
340-226-0120	83	SO_2	EAL 50 ppm 3-hour average	3 hour rolling	96	84
40 CFR 60.44b(d) PSD Permit 04-0003	85	NO_x	0.30 lb/MMBtu	30-day rolling	96	87, 96
340-226-0120	86	NO_x	175 ppm EAL	24 hour rolling	96	87
340-226-0120	88	CO	50 ppm EAL	24 hour rolling	96	89
340-226-0120	90	combustion efficiency	99.9% EAL	24 hour rolling		91
340-226-0120	94	combustion temperature	1,800°F at one second residence time 1-hour average E AL	1 hour block avg		95

72. Applicable Requirement: The permittee shall not burn any liquid fuels in emissions unit EU35. [OAR 340-228-0200(1)(a)]

73. Monitoring Requirement: The permittee shall monitor daily all fuels used in emissions unit EU35.

73.a. Recordkeeping: The permittee shall record the following:

73.a.i. the amounts of each fuel combusted during each day; and

73.a.ii. the annual capacity factor calculated individually for natural gas, wood, and wastewater treatment plant sludge for each calendar quarter. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

The permittee shall also record the hours of operation for emissions unit EU35. [40 CFR 60.49b(d)]

74. Applicable Requirement: The permittee shall not cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity as a 6-minute average, except for one 6-minute period per hour of not more than 27 percent opacity. [40 CFR 60.43b(f)]

75. Monitoring Requirement: The permittee shall monitor opacity from emissions unit EU35 by calibrating, maintaining, and recording the output of a continuous opacity monitoring system (COMS) on monitoring point DP832 in accordance with the Department's Continuous Monitoring Manual. [40 CFR 60.48b(a)]

75.a. Opacity shall be calculated for six (6) minute periods.

75.b. The daily arithmetic average opacity shall be calculated from the six minute opacities. [40 CFR 60.48b(a)]

75.c. Recordkeeping: The permittee shall record the six minute and hourly average opacities.

76. Applicable Requirement: The permittee shall take corrective action to restore operation to the approved operating range below as expeditiously as practicable and return to highest and best practicable treatment and control upon exceeding the approved operating range as a 1 hour average. The exceedance of the approved operating range/emission action level shall not be considered a violation of an emission limit in this permit. [OAR 340-226-0120(2)(a) and 340-212-0200]

76.a. The approved operating range is 10 percent opacity or less.

77. Monitoring Requirement: The permittee shall monitor and record exceedances of the emission action levels for EU35 and the corrective actions taken.

77.a. Recordkeeping: The permittee shall record the six minute and hourly average opacities.

78. Applicable Requirement The permittee shall not cause or allow the emission of particulate matter in excess of 0.01 grain per standard cubic foot from emissions unit EU35, corrected to 7% oxygen, using EPA Method 5 test method. [02/18/94 ACDP 04-0004, condition 9] [state-only enforceable pending EPA approval of SIP]

79. Applicable Requirement: The permittee shall not cause to be discharged from emissions unit EU35, any gases that contain particulate matter in excess of 0.10 lb/MMBtu heat input. [40 CFR 60.43b(c)(1)].

80. Monitoring Requirement: At least once per year the permittee shall perform source testing for particulate matter emissions in accordance with Condition 96.

80.a. Recordkeeping: The permittee shall record the results of the source test as required in Condition 96.

81. Applicable Requirement: The permittee shall not cause or allow the emission of sulfur dioxide in excess of 1.6 pounds/million British thermal unit (lbs/MMBtu) heat input, maximum two-hour average, from emissions unit EU35, while burning solid fuels. [OAR 340-228-0200(1)(b)]

82. Monitoring Requirement: At least once per year the permittee shall perform source testing for sulfur dioxide emissions in accordance with Condition 96.

82.a. Sulfur dioxide emissions shall be measured in accordance with EPA Method 6 or 6C.

82.b. Recordkeeping: The permittee shall record the results of the source test as required in Condition 96.

83. Applicable Requirement: The permittee shall take corrective action to return to highest and best practicable treatment and control upon exceeding the SO_2 emission action level of 50 ppm, at 7% oxygen as a 3-hour rolling average. The exceedance of an action level shall not be considered a violation of an emission limit in this permit. [OAR 340-226-0120(2)(a)]

84. Monitoring Requirement: The permittee shall monitor sulfur dioxide from emissions unit EU35 by calibrating, maintaining, and recording the output of a Continuous Emissions Monitoring System(s) on monitoring point DP832 in accordance with the Department's Continuous Monitoring Manual.

84.a. Monitoring for sulfur dioxide shall be continuous using a three (3) hour rolling averaging period.

84.b. The three-hour rolling average shall be calculated from 1-hour arithmetic averages.

84.c. Recordkeeping: The permittee shall record the 1-hour and 3-hour rolling averages.

85. Applicable Requirement: The permittee shall not cause to be discharged into the atmosphere from emissions unit EU35 any gases that contain nitrogen oxides in excess of 0.30 lb/MMBtu heat input, as a 30-day rolling average, at all times, in accordance with OAR and 40 CFR 60.44b(d) and PSD Permit 04-0003. [OAR , 40 CFR 60.44b(d) and PSD Permit 04-0003]

86. Applicable Requirement: The permittee shall take corrective action to return to highest and best practicable treatment and control upon exceeding the NO_x emission action level of 175 ppm, corrected to 7% oxygen, as a 24-hour rolling average. The exceedance of an action level shall not be considered a violation of an emission limit in this permit. [OAR 340-226-0120(2)(a)]

87. Monitoring Requirement: The permittee shall monitor nitrogen oxides emissions from emissions unit EU35 by calibrating, maintaining, and recording the output of a CEMS on monitoring point DP832 in accordance with the Department's Continuous Monitoring Manual. [40 CFR 60.48b(b) and (e)]

87.a. The CEMS shall be operated and data recorded during all periods of operation of EU35, except for continuous monitoring system breakdowns and repairs. Data shall be recorded during calibration checks, and zero and span adjustments. [40 CFR 60.48b(c)]

87.b. The CEMS shall be used to determine one-hour average nitrogen oxide concentrations. The one-hour averages shall be calculated using a minimum of one cycle of sampling and analyzing for each successive 15-minute period as required by section 5.2.C.2 of the Department's Continuous Monitoring Manual. At least 4 data points must be used to calculate each one-hour average. [Continuous Monitoring Manual and 40 CFR 60.48b(d)]

87.c. The one-hour average nitrogen oxide concentrations shall be expressed in ppmdv corrected to 7% oxygen and lb/MMBtu heat input and shall be used to calculate the average emission rates specified below.

87.c.i. Emissions expressed as ppmdv, corrected to 7% oxygen, shall be recorded as a 24-hour rolling average. A new 24-hour rolling average emission concentration shall be calculated each hour of operation of emissions unit EU35 as the average of all of the hourly NO_x emission data for the preceding 24 operating hours.

87.c.ii. The emission rate expressed in pounds per MMBtu heat input is determined using:

87.c.ii.(1) oxygen or carbon dioxide measurements and nitrogen oxide measurements,

87.c.ii.(2) the dry basis F factor defined in EPA Method 19 (40 CFR 60, Appendix A), and

87.c.ii.(3) the dry basis emission rate calculation procedure contained in EPA Method 19. [40 CFR 60.46b(d)(6)]

87.d. Emissions expressed as lb/MMBtu heat input shall be recorded as a 30-day rolling average. A new 30-day rolling average emission rate shall be calculated each day of operation of emissions unit EU35 as the average of all the hourly NO_x emission data for the preceding 30 operating days. [40 CFR 60.46b(f)]

87.e. The span value of the nitrogen oxide monitor shall be 500 ppm. [40 CFR 60.48b(e)]

87.f. When NO_x emission data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7, Method 7A, or other approved reference methods to provide emission data for a minimum of 75% of the operating hours in each operating day of emissions unit EU35, in at least 22 of 30 successive operating days. [40 CFR 60.48b(f)]

87.g. Recordkeeping: The permittee shall record the following:

87.g.i. The one-hour NOx averages, corrected to 7% oxygen;
87.g.ii. The exhaust gas oxygen content;
87.g.iii. The rolling 24-hour NOx ppmdv, corrected to 7% oxygen;
87.g.iv. calendar date;
87.g.v. average hourly nitrogen oxides emission rates (expressed as NO_2) (lb/MMBtu heat input) measured;
87.g.vi. 30-day average nitrogen oxides emission rates (lb/MMBtu heat input) calculated at the end of each EU35 operating day from the measured hourly nitrogen oxide emission rates for the preceding 30 operating days;
87.g.vii. identification of the EU35 operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under condition 85, with the reasons for such excess emissions as well as a description of corrective actions taken;
87.g.viii. identification of the EU35 operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;
87.g.ix. identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;
87.g.x. identification of "F" factor, defined in EPA Method 19 (40 CFR 60, Appendix A), used for calculations, method of determination, and type of fuel combusted;
87.g.xi. identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system;
87.g.xii. description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3 (40 CFR 60, Appendix B).
87.g.xiii. results of daily CEMS drift tests and quarterly accuracy assessments as required under the Department's Continuous Monitoring Manual;

87.g.xiv. The permittee shall record exceedances of the emission action level for EU35 and the corrective actions taken.

88. Applicable Requirement: The permittee shall take corrective action to return to highest and best practicable treatment and control upon exceeding the CO emission action level of 50 ppm, corrected to 7% oxygen, as a 24-hour rolling average. The exceedance of an

action level shall not be considered a violation of an emission limit in this permit. [OAR 340-226-0120(2)(a)]

89. Monitoring Requirement: The permittee shall monitor carbon monoxide emissions from emissions unit EU35 by calibrating, maintaining, and recording the output of a CEMS on monitoring point DP832 in accordance with the Department's Continuous Monitoring Manual. [OAR 340-226-0120(2)(a)]

89.a. The permittee shall calculate a rolling 24-hour CO average using 1-hour averages. The 1-hour averages shall be determined from a minimum of 4 measurement cycles per hour, with a minimum of 1 measurement cycle every 15 minutes, except during periods of calibration.

89.b. CO measurements shall be corrected to 7% oxygen.

89.c. Recordkeeping: The permittee shall record the 1-hour average and 24-hour rolling average CO concentrations.

90. Applicable Requirement: The permittee shall take corrective action to return to highest and best practicable treatment and control of EU35 whenever combustion efficiency falls below 99.9 percent as a 24-hour rolling average. [OAR 340-226-0120(2)(a)]

91. Monitoring Requirement: The permittee shall monitor combustion efficiency as follows:

91.a. The permittee shall monitor carbon monoxide and carbon dioxide emissions from emissions unit EU35 by calibrating, maintaining, and recording the output of a Continuous Emissions Monitoring System(s) on monitoring point DP832 in accordance with the Department's Continuous Monitoring Manual.

91.b. Monitoring for carbon monoxide and carbon dioxide shall be continuous using a 24 hour rolling averaging period. The 24-hour rolling average shall be calculated from 1-hour arithmetic averages.

91.c. The CO and CO_2 emissions shall be used to calculate the combustion efficiency (CE) based on a 24-hour rolling average according to the following equation:

$$CE = \frac{CO_2}{(CO_2 + CO)} \times 100$$

where

CO = carbon monoxide in the exhaust gas (ppmv dry);

CO_2 = carbon dioxide in the exhaust gas (ppmv dry).

91.d. Recordkeeping: The permittee shall record the 1-hour CO and CO_2 emissions and CE as well as the 24-hour rolling average CO, CO_2 and CE.

92. Monitoring Requirement The permittee shall install, calibrate, maintain, and operate an oxygen continuous parameter monitoring system (CPMS) in accordance with the Department's Continuous Monitoring Manual and the manufacturer's written instructions. The CPMS shall include a continuous recorder. [OAR 340-218-0050(3)(a)]

93. Monitoring Requirement The permittee shall install, calibrate, maintain, and operate an air flow continuous parameter monitoring system (CPMS) in accordance with the Department's Continuous Monitoring Manual and the manufacturer's written instructions. The CPMS shall include a continuous recorder. [OAR 340-218-0050(3)(a)]

94. Applicable Requirement: Whenever burning solid fuel, the permittee shall take corrective action to return to highest and best practicable treatment and control of EU35 whenever combustion temperature and residence time fall below 1,800°F with a residence time of at least one second, calculated on a 1-hour block average. [OAR 340-226-0120(2)(a)]

95. Monitoring Requirement: The permittee shall install, calibrate, maintain, and operate a combustion chamber temperature continuous parameter monitoring system (CPMS) in accordance with the Department's Continuous Monitoring Manual and the manufacturer's written instructions, and record the output of the system.

95.a. Real time data shall be displayed at least once every minute during any period of operation of EU35.

95.b. The permittee shall calculate the combustion chamber temperature as an hourly arithmetic average from the continuous monitoring system data.

95.c. Residence time shall be calculated using the temperature mentoring system and the temperature profile and residence time study results approved by the Department.

95.d. Insufficient data completeness, as defined by the Department's Continuous Monitoring Manual, excluding CPMS downtime due to zero and span checks, cylinder gas audits, and routine monitor maintenance, will void that data period.

95.e. Recordkeeping: Hourly averages of the data shall be recorded once each clock hour that emissions unit EU35 is in operation.

SOURCE TESTING AND EMISSION FACTOR VERIFICATION

96. Monitoring Requirement: At least once each year, the permittee shall conduct a source test of the fluid bed boiler, EU35.

96.a. Source testing shall be performed in accordance with the Source Testing and Emission Factor Verification Procedure set forth in the TEST METHODS AND PROCEDURES SECTION, Condition 158 of this permit and the Department-approved Quality Assurance Plan, as amended.

96.b. The source testing shall be for the following pollutants and parameters:

96.b.i. Particulate matter;
96.b.ii. Sulfur dioxide;
96.b.iii. Nitrogen oxides;
96.b.iv. Carbon monoxide;
96.b.v. Carbon dioxide; and
96.b.vi. Oxygen.

96.c. All annual source testing on emissions unit EU35 for different pollutants shall be performed concurrently.

96.d. Successive annual source tests shall be at least six (6) months apart.

96.e. Source testing shall be conducted using a combination of fuels that is representative of normal operation for that year.

96.f. The Department shall be notified in writing at least 30 days prior to any source test.

96.g. A COMS shall be used to measure opacity during the source test. The minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the source test.

96.h. DEQ Method 5 shall be used to verify the emission factor for the PSEL as required in condition 154.

96.i. EPA Method 5 shall be used to measure particulate emissions for compliance with the NSPS limits, Condition 79, and for compliance with the grain loading limit, Condition 78. [40 CFR 60.46b(d)(2)]

96.i.i. For EPA Method 5, the temperature of the sample gas in the probe and filter holder is monitored and is maintained at 160°C (320°F). [40 CFR 60.46b(d)(4)]

96.i.ii. For determination of particulate matter emissions, the oxygen or carbon dioxide sample is obtained simultaneously with each run of EPA Method 5 by traversing the duct at the same sampling location in accordance with Method 3A or 3B. [40 CFR 60.46b(d)(5)]

96.i.iii. Method 1 is used to select the sampling site and the number of traverse sampling points. The sampling time for each run is at least 120 minutes and the minimum sampling volume is 1.7 dscm (60 dscf). [40 CFR 60.46b(d)(3)]

96.i.iv. For each run using EPA Method 5, the emission rate expressed in pounds per MMBtu heat input is determined using:

96.i.iv.(1) the oxygen or carbon dioxide measurements and particulate matter measurements,
96.i.iv.(2) the dry basis F factor defined in EPA Method 19 (40 CFR 60, Appendix A), and
96.i.iv.(3) the dry basis emission rate calculation procedure contained in EPA Method 19. [40 CFR 60.46b(d)(6)]

96.j. EPA Methods 6 or 6C shall be used to measure SO_2 emissions, and the emission rate expressed in pounds per MMBtu heat input shall be determined using the following:

96.j.i. Oxygen shall be measured by Method 3 or 3A concurrently with the SO_2 measurements with the SO_2 concentration as a maximum two-hour average,

96.j.ii. the dry basis F factor defined in EPA Method 19 (40 CFR 60, Appendix A),

96.j.iii. the dry basis emission rate calculation procedure contained in EPA Method 19, and

96.j.iv. a source test on the outlet of the fluid bed boiler baghouse.

96.k. analysis of composite solid fuel samples collected during each source test.

96.l. EPA Methods 10 and 3 or 3A shall be used to measure CO, O_2, and CO_2 emissions, respectively.

96.m. EPA Method 7E shall be used to measure to measure nitrogen oxides emissions.

96.n. The permittee shall monitor nitrogen oxides from the steam generating unit for 30 successive steam generating unit operating days using the nitrogen oxides CEMS required under condition 87. The 30-day average emission rate is used to

determine compliance with the nitrogen oxides emission standard under condition 85. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period. [40 CFR 60.46b]

96.n.i. Oxygen shall be measured by Method 3 or 3A concurrently with the NO_x measurements.

96.n.ii. Emission rates shall be calculated in accordance with Method 19.

96.o. During each source test, the permittee shall record the following information:

96.o.i. opacity;
96.o.ii. weight of solid material charged;
96.o.iii. type of fuel and physical characteristics of the fuel, as specified in the Department-approved James River QA/QC Plan for Burning Trials, as amended;
96.o.iv. process operating parameters including steam flow, steam pressure, steam temperature, feed water temperature, air flow, boiler oxygen; and
96.o.v. operating parameters of the fluid bed boiler baghouse, PCD CD832, including baghouse pressure drop, gas flow rate, gas velocity, and oxygen.

96.p. The source test report shall be submitted to the Department within sixty (60) days of the source test.

END OF SECTION

EMISSIONS UNIT SPECIFIC LIMITATIONS – NON-CONDENSIBLE GAS (NCG) INCINERATION (EU23)

EU ID	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standards	Averaging Time	Testing Condition	Monitoring Condition
EU23	340-234-0210(4)	97	opacity	20% 3 minutes in 60 minutes			99
	340-228-0210(1)(b)	98	PM/PM_{10}	0.1 gr/dscf @ 12% CO_2 or 50% excess air, 3-hour average			99
	340-234-0210	100	non-condensible gas venting	Not more than 60 minutes venting			101
	340-234-0210(1)(d)	102	combustion temperature and residence time	650°C (1,200°F) for 0.3 second			103
	340-226-0120	104	combustion temperature EAL	1,250°F EAL 1-hour average			105

97. Applicable Requirement: The permittee shall not cause or allow the emissions of any air contaminant into the atmosphere from emissions unit EU23 (NCG Incinerator) for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 20% opacity, excluding uncombined water. [OAR 340-234-0210(4)]

98. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter, in excess of 0.1 grain per standard cubic foot from emissions unit EU23, corrected to 12% CO_2 or 50% excess air. [OAR 340-226-0210(2)]

99. Monitoring Requirement The permittee shall monitor daily and monthly natural gas usage for emissions unit EU23. As long as the only fuel added is natural gas, the permittee is assumed to be in compliance with conditions 97 and 98.

99.a. Recordkeeping The permittee shall maintain daily and monthly records of natural gas usage for unit EU23.

100. Applicable Requirement: In the event that the lime kiln, EU21, is not used for the incineration of non-condensibles, the efficient incineration of non-condensibles shall be transferred to the NCG incinerator, EU23. The venting of non-condensibles shall be minimized, but in no case shall the time exceed one hour. [OAR 340-234-0210(1)(d)]

101. Monitoring Requirement: The permittee shall monitor the date, time and duration of all periods of non-condensible venting.

101.a. Recordkeeping: The permittee shall maintain the following records:

101.a.i. the date, time and duration of all periods of non-condensible venting.

101.a.ii. If a venting period exceeds 60 minutes, the permittee shall record the date, time and duration, as well as the reason(s) for venting.

102. Applicable Requirement: When used for the incineration of non-condensibles, EU23 shall be operated as follows: [OAR 340-234-0210(1)(d)]

102.a. The NCG incinerator combustion chamber shall be maintained at a temperature not less than 650°C (1,200°F).

102.b. The residence time of the NCG incinerator shall be at least 0.3 second.

103. Monitoring Requirement: The permittee shall install, calibrate, operate, maintain, and record the output of a continuous process temperature monitor at the NCG incinerator, EU23, during operation in accordance with the manufacturer's written instructions. Real time data shall be displayed at least once every minute during any period of operation of EU23.

103.a. Installation of the temperature monitoring device shall be at a location sufficient to monitor the temperature at the 0.3 second residence time as determined by condition 102.

103.b. The permittee shall calculate the temperature as an hourly arithmetic average from the continuous monitoring system data.

103.c. Hourly averages of the data shall be recorded once each clock hour that EU23 is in operation.

103.d. Insufficient data completeness, as defined by the Department's Continuous Monitoring Manual, excluding CPMS downtime due to zero and span checks, performance audits, and routine monitor maintenance, will void that data period.

103.e. Recordkeeping: The permittee shall maintain records of the following:

103.e.i. the hourly arithmetic average temperatures; and
103.e.ii. the residence time study that was required by Condition 139 of the Oregon Title V permit issued on January 2, 1996.

104. Applicable Requirement: The permittee shall take corrective action to return to highest and best efficient operations if the NCG incinerator (EU23) temperature falls below 1,250°F as an hourly average. The exceedance from an action level shall not be considered a violation of an emission limit in this permit. [OAR 340-226-0120(2)(d)] [state-only enforceable pending EPA approval of SIP]

105. Monitoring Requirement: The permittee shall monitor all periods when the NCG incinerator, EU23, operates below 1,250 F, and the corrective actions taken.

105.a. Recordkeeping: The permittee shall record all periods when the NCG incinerator, EU23, operates below 1,250 F, and the corrective actions taken.

END OF SECTION

EMISSIONS UNIT SPECIFIC LIMITATIONS – PRINTING MACT STANDARD

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Averaging Time	Testing Condition	Monitoring Condition
40 CFR 63.821(b)(2) Subpart KK	106.	Organic HAP	Apply no more than 400 kg/month			107

106. Applicable Requirement The permittee shall apply no more than 400 kg per month (880 lb/month), for every month, of organic HAP on all product and packaging rotogravure or wide-web flexographic printing presses. [40 CFR 63.821(b)(2)]

107. Monitoring Requirement: The permittee shall monitor the amount of organic HAPs applied on all product and packaging rotogravure or wide-web flexographic printing presses as follows:

107.a. Monitor the total volume and organic HAP content of each material applied on product and packaging rotogravure or wide-web flexographic printing presses;

107.b. Not more than 30 days following the end of each month, calculate the total mass (kgs or lbs) of organic HAP applied on product and packaging rotogravure or wide-web flexographic printing presses for each month during which the affected presses are operated.

107.c. The organic HAP content of all materials applied on product and packaging rotogravure or wide-web flexographic printing presses shall be determined from manufacturer's or supplier's data sheets or Material Safety Data Sheets.

107.d. Recordkeeping The permittee shall maintain the following records:

107.d.i. the total volume and organic HAP content of each material applied on product and packaging rotogravure or wide-web flexographic printing presses each month;

107.d.ii. the total mass (kgs or lbs) of organic HAP applied on product and packaging rotogravure or wide-web flexographic printing presses for each month during which the affected presses are operated.

END OF SECTION

EMISSIONS UNIT SPECIFIC LIMITATIONS - OTHER EMISSIONS UNITS

EU	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standards	Averaging Time	Testing Condition	Monitoring Condition
EU38, EU39, EU41, EU42, EU50, EU51, EU52	340-234-0210(4)	108	opacity	20% 3 minutes in 60 minutes		112, 157	112
EU38-except DP606	340-226-0210(1)	109	PM/PM_{10}	0.2 gr/dscf	3-hour average		112
EU38-DP606 only, EU39, EU41, EU42, EU50, EU51, EU52	340-226-0210(2)	110	PM/PM_{10}	0.1 gr/dscf	3-hour average		112
EU38, EU41, EU42, EU50, EU51, EU52	340-226-0310	111	Process Weight	See Condition 111			112
EU38-DP606 only	340-212-0200	113	CAM	300 gallons per minute liquid flow rate in #5 PM Venturi Scrubber	3-hour average		114
EU39	PSD Permit 04-0003	115	NOx	Dryers, 0.0913 lb/MMBtu, PM #6 predryers, 0.127 lb/MMBtu	3-hour average	116	116

EU	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standards	Averaging Time	Testing Condition	Monitoring Condition
EU37a	340-234-0210(4)	117	opacity	20% 3 minutes in 60 minutes			120
	340-226-0210(2)	118	PM/PM_{10}	0.1 gr/dscf 3-hour average			120
	340-226-0310	119	Process Weight	See Condition 119			120

EU	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standards	Averaging Time	Testing Condition	Monitoring Condition
EU38a	340-234-0210(4)	121	opacity	20% 3 minutes in 60 minutes			124
	340-226-0210(1)	122	PM/PM_{10}	0.2 gr/dscf 3-hour average			124
	340-226-0310	123	Process Weight	See Condition 123			124

EU	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standards	Averaging Time	Testing Condition	Monitoring Condition
EU43, EU44, EU47	340-234-0210(4)	125	opacity	20% 3 minutes in 60 minutes			126

EU38, EU39, EU41, EU42, EU50, EU51 and EU52

108. Applicable Requirement: The permittee shall not cause or allow the emissions of any air contaminant into the atmosphere from emissions units EU38, EU39, EU41, EU42, EU50, EU51, and EU52 for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 20% opacity, excluding uncombined water. [OAR 340-234-0210(4)]

109. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in excess of 0.2 grain per standard cubic foot from emissions unit EU38, except at monitoring point DP606. [OAR 340-226-0210(1)]

110. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in excess of 0.1 grain per standard cubic foot from emissions units EU38 at monitoring point DP606 only, EU39, EU41, EU42, EU50, EU51, and EU52. [OAR 340-226-0210(2)]

111. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in any one hour from any process listed in the table below in excess of the amount shown in Table 1, OAR 340-226-0320, for the process weight allocated to that process. [OAR 340-226-0310]

Table for Condition 111

EU(s)	Emissions Unit Name	Materials Introduced Into Process
EU38	#5 PM Venturi Scrubber	paper

EU(s)	Emissions Unit Name	Materials Introduced Into Process
	#1 & #2 PM Rotoclones	paper
EU41	#3 & #4 PM Dryer Hoods	paper
EU42	Pulp Dryer	pulp
EU50	Chip Storage Silo Material Handling	wood chips
EU51	Kraft Mill Cyclone	sawdust, wood fines, wood chips
EU52	Kraft/Groundwood Silo Material Handling	chips, sawdust

112. Monitoring Requirement: The permittee shall monitor visible emissions from emissions units EU38, EU39, EU41, EU42, EU50, EU51, and EU52 in accordance with the Visible Emissions Monitoring procedures in the TEST METHODS AND PROCEDURES SECTION (Condition 157) of this permit and the following:

112.a. The permittee shall conduct visible emission surveys at least once each calendar quarter.

112.b. All visible emissions surveys shall be conducted during operating conditions that have the potential to create visible emissions (e.g., during drying, winding, and chip screening and handling).

112.c. Monitoring shall be for the following emission points:
- 112.c.i. At EU38 : DP408, DP409, DP410, DP411 and DP606
- 112.c.ii. At EU39 : DP404, DP405, DP413, and DP415
- 112.c.iii. At EU41 : DP522
- 112.c.iv. At EU42 : DP389 or DP390
- 112.c.v. At EU50 : DP104 or DP105
- 112.c.vi. At EU51 : DP108
- 112.c.vii. At EU52 : DP220 or DP221

112.d. Recordkeeping: The permittee shall maintain the following records of visible emission monitoring:

- 112.d.i. the date of visible emissions monitoring;
- 112.d.ii. the results of visible emissions monitoring.

113. Applicable Requirement: The permittee shall take corrective action to restore operation of the #5 PM Venturi Scrubber (EU38, DP606) to the approved operating range below as expeditiously as practicable upon exceeding the approved range as a 3-hour average. The exceedance of the approved operating range shall not be considered a violation of an emission limit in this permit. [OAR 340-212-0250]

113.a. The approved operating range for scrubber liquid influent flow rate is 300 gallons per minute or higher.

114. Monitoring Requirement: The permittee shall monitor the venturi scrubber liquid influent flow rate at monitoring point DP606 of EU38, by calibrating, maintaining, and recording the output of a continuous parameter monitoring system (CPMS) in accordance with the Department's Continuous Monitoring Manual and the following. [OAR 340-212-0200]

114.a. The flow rate shall be monitored as a 3-hour block average.

114.b. The minimum monitoring frequency shall be at least four times per hour.

114.c. The permittee shall monitor exceedances of the operating parameter range and the corrective actions taken.

114.d. Insufficient data completeness, as defined by the Department's Continuous Monitoring Manual, excluding CPMS downtime due to zero and span checks, performance audits, and routine monitor maintenance, will void that data period.

114.e. Recordkeeping: The permittee shall record the following: [OAR 340-234-0240(3)(b)]

114.e.i. The 3-hour block average influent liquid flow rate; and
114.e.ii. Exceedances of the approved operating range and the corrective actions taken.

115. Applicable Requirement: The permittee shall not cause or allow the emission of nitrogen oxides in excess of the values below from emissions unit EU39, as a 3-hour arithmetic average. [PSD Permit 04-0003]

115.a. 0.127 lb/MMBtu from PM#6 predryers; and
115.b. 0.0913 lb/MMBtu from PM1, PM2, PM5 and PM6 dryer vents.

116. Monitoring Requirement: Nitrogen oxide emissions from EU39 shall be monitored by performing source testing as follows:

116.a. Source testing of PM#6 shall be performed no more than 180 days after startup of the low-NOx burners required by PSD Permit 04-0003.

116.b. Source testing of PM#6 shall include at least one predryer and at least one dryer burner.

116.c. The PM#6 source tests must be for the following pollutants:
- 116.c.i. oxides of nitrogen (NOx), using EPA Method 7E;
- 116.c.ii. carbon monoxide (CO), using EPA Method 10;
- 116.c.iii. particulate matter (PM), using DEQ Method 5.

116.d. Source tests must be conducted on at least 1 dryer exhaust stack representing each type and BTU rating of low-NOx dryer burner used on PM#1, PM#2 and PM#5. Source testing shall be performed no later than July 1, 2003, or as required by PSD Permit 04-0003, whichever is sooner.

116.e. The PM#1, PM#2 and PM#5 source tests must be for the following pollutants:
- 116.e.i. oxides of nitrogen (NOx), using EPA Method 7E;
- 116.e.ii. carbon monoxide (CO), using EPA Method 10.

116.f. Source testing shall be performed in accordance with the Source Testing and Emission Factor Verification Procedure set forth in the TEST METHODS AND PROCEDURES SECTION (page 77) of this permit and the Department-approved Quality Assurance Plan, as amended.

116.g. During each test, the permittee shall monitor the following information:

- 116.g.i. Fuel usage, in MMBtu/hr;
- 116.g.ii. opacity monitoring is not required because of the wet plumes.

116.h. Recordkeeping: The permittee shall record the following information for each source test:

- 116.h.i. the nitrogen oxides emission rate;
- 116.h.ii. the carbon monoxide emission rate;
- 116.h.iii. the particulate matter emission rate, if applicable.

EU37a

117. Applicable Requirement: The permittee shall not cause or allow the emissions of any air contaminant into the atmosphere from emissions units EU37a for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 20% opacity, excluding uncombined water. [OAR 340-234-0210(4)]

118. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in excess of 0.1 grain per standard cubic foot from emissions unit EU37a. [OAR 340-226-0210(2)]

119. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in any one hour from any process listed in the table below in excess of the amount shown in Table 1, OAR 340-226-0320, for the process weight allocated to that process. [OAR 340-226-0310]

Table for Condition 119

EU(s)	Emissions Unit Name	Materials Introduced Into Process
EU37a	Limestone Daybin, Ash Silo Transfer Receiver, Saltcake Silo and Day Bin	limestone, ash, sodium sulfate

120. Monitoring Requirement The permittee shall maintain monthly records of inspection and maintenance procedures for monitoring for emissions unit EU37a at monitoring points DP835, DP836, DP806:

120.a. Inspection records of the baghouse bags, recorded on inspection forms.

120.b. Maintenance activity records of replacement of baghouse bags on occurrence, recorded in a maintenance log.

120.c. Recordkeeping The permittee shall maintain records of inspection and maintenance procedures for emissions unit EU37a.

EU38a

121. Applicable Requirement: The permittee shall not cause or allow the emissions of any air contaminant into the atmosphere from emissions units EU38a for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 20% opacity, excluding uncombined water. [OAR 340-234-0210(4)]

122. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in excess of 0.2 grain per standard cubic foot from emissions unit EU38a. [OAR 340-226-0210(1)]

123. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in any one hour from any process listed in the table below in excess of the amount shown in Table 1, OAR 340-226-0320, for the process weight allocated to that process. [OAR 340-226-0310]

Table for Condition 123

EU(s)	Emissions Unit Name	Materials Introduced Into Process
EU38a	Lime Slaker Vent, Lime Tank Cyclone	lime

124. Monitoring Requirement The permittee shall maintain monthly records of inspection and maintenance procedures for monitoring for emissions units EU38a at monitoring points DP368 and DP376:

124.a. Inspection records of the condition of the water spray at monitoring point DP368, recorded on inspection forms.

124.b. Inspection records of the condition of the transport air discharge at monitoring point DP376, recorded on inspection forms.

124.c. Maintenance activity records of corrective maintenance results from the monthly inspections and routinely every year, recorded in a maintenance log.

124.d. Recordkeeping The permittee shall maintain records of inspection and maintenance procedures for emissions unit EU38a.

EU43, EU44 and EU47

125. Applicable Requirement: The permittee shall not cause or allow the emissions of any air contaminant into the atmosphere from emissions units EU43, EU44, and EU47 for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 20% opacity, excluding uncombined water. If sources of excess fugitive emissions are identified during the monitoring survey, the permittee shall take corrective action to control fugitive emissions. [OAR 340-234-0210(4)]

126. Monitoring Requirement Instead of conducting EPA Method 9 testing on fugitive emissions units EU43, EU44, and EU47, the permittee shall maintain records of the following:

126.a. At least quarterly, the permittee shall visually survey the facility for any sources of excessive fugitive emissions. For the purpose of this survey, excessive emissions are considered to be any visible emissions from fugitive emissions units EU43, EU44, or EU47 that leave the plant site boundaries. The person conducting this survey does not have to be EPA Method 9 certified. However, the individual

should be familiar with the procedures of EPA Method 9 including using the proper location to observe visible emissions.

126.b. If determined to be necessary, the permittee shall remove earth and other material from paved roads with a sweeper.

126.c. Recordkeeping The permittee shall maintain records of inspections and any corrective actions taken.

END OF SECTION

EMISSIONS UNIT SPECIFIC LIMITATIONS – ELECTRICAL GENERATING GAS TURBINES (EU60)

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standards	Averaging Time	Testing Condition	Monitoring Condition
OAR340-208-0110(2)	127	Opacity	20% for 3 minutes in any one hour			130
OAR 340-208-0600	128	Opacity	20% for 30 seconds in any one hour			130
OAR 340-226-0210(1)(b)	129	PM	0.1 gr/dscf			130
OAR340-226-0130	131	TACT Determination	Do not operate at less than 90% of full load			132
40 CFR 60.333(b)	133	Fuel sulfur content	0.8 % by weight maximum			134
40 CFR 60.332	135	NOx	See Condition 135		136	
40 CFR Subpart A	137	NSPS General Requirements				n/a

127. Applicable Requirement: The permittee shall not cause or allow the emissions of any air contaminant into the atmosphere from emissions unit EU60 for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 20% opacity, excluding uncombined water. [OAR 340-208-0110(2)(b)]

128. Applicable Requirement: The permittee shall not cause or allow the emissions of any air contaminant into the atmosphere from emissions unit EU60 for a period or periods aggregating more than 30 seconds in any one hour which is equal to or greater than 20% opacity, excluding uncombined water. [OAR 340-208-0600]

129. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in excess of 0.1 grain per standard cubic foot from emissions unit EU60, corrected to 12% CO_2 or 50% excess air, as a three-hour average. [OAR 340-226-0210(1)(b)]

130. Monitoring Requirement: The permittee shall monitor visible emissions from emissions unit EU60 in accordance with the following:

130.a. The permittee shall monitor and record fuel usage as required in Condition 134 in lieu of conducting visible emissions observations.

130.b. Recordkeeping: The permittee shall record fuel usage as required in Condition 134.

131. Applicable Requirement The permittee shall not operate any gas turbines at less than 90 percent of full load, except during periods of startup, shutdown or malfunction. This is

a TACT determination made in accordance with OAR 340-226-0130. [OAR 340-226-0130]

132. Monitoring Requirement: The permittee shall continuously monitor the operating load, as a 1 hour block average, at all times when operating any gas turbine, except during periods of startup, shutdown or malfunction.

132.a. Recordkeeping Each day of operation, the permittee shall record the lowest monitored 1 hour block average operating load, excluding periods of startup, shutdown or malfunction.

133. Applicable Requirement The permittee shall not burn fuel in emission unit EU60 which contains sulfur in excess of 0.8 percent by weight, except when a turbine is operating on emergency fuel. [40CFR60.333(b)]

134. Monitoring Requirement The permittee shall perform the following monitoring for emissions unit EU60. [40 CFR60.334(b)]

134.a. Fuel type and amount used shall be monitored each day of operation.

134.b. Fuel sulfur content shall be monitored each day in accordance with 40 CFR 60.334(b) and 60.335(d), unless a custom schedule for monitoring fuel sulfur content is developed and approved by EPA. If a custom schedule for monitoring fuel sulfur content is developed and approved by EPA, then the permittee shall conduct monitoring per the custom schedule.

134.c. Fuel nitrogen content shall be monitored each day in accordance with 40 CFR 60.334(b) and 60.335(a), unless a custom schedule for monitoring fuel nitrogen content is developed and approved by EPA. If a custom schedule for monitoring fuel nitrogen content is developed and approved by EPA, then the permittee shall conduct monitoring per the custom schedule.

134.d. Recordkeeping The permittee shall maintain the following records:

134.d.i. Daily fuel type and amount used.

134.d.ii. Fuel sulfur content shall be recorded daily, unless a custom schedule for monitoring fuel sulfur content is developed and approved by EPA, then the permittee shall record the information specified in the custom schedule.

134.d.iii. Fuel nitrogen content shall be recorded daily, unless a custom schedule for monitoring fuel nitrogen content is developed and approved by EPA, then the permittee shall record the information specified in the custom schedule.

135. Applicable Requirement On or after the date of the performance test required by Condition 136 the permittee shall not cause to be discharged into the atmosphere from EU60 any gases which contain nitrogen oxides in excess of the following: [40CFR60.332]

135.a. For turbines with a heat input at peak load of greater than 100 million Btu per hour based on the lower heating value of fuel as measured at actual peak load for the facility;

$$STD = 0.0075 \times \left(\frac{14.4}{Y} \right) + F$$

135.b. For turbines with a heat input at peak load of greater than 10 million Btu per hour but less than 100 million Btu per hour based on the lower heating value of fuel as measured at actual peak load for the facility,

$$STD = 0.0150 \times \left(\frac{14.4}{Y} \right) + F$$

where:

STD = allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour), or actual measured heat rate based on the lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F = 0 (fuel bound nitrogen for natural gas).

135.c. Regenerative cycle gas turbines with a heat input less than 100 million Btu per hour are exempt from the NOx limit contained in this condition.

136. Monitoring Requirement: The following procedures and test methods shall be used for monitoring emissions from EU60:

136.a. Within 60 days after achieving the maximum production rate at which each turbine will be operated, but not later than 180 days after initial startup the permittee shall conduct performance tests to determine compliance with the emissions standards in the NSPS provisions in Condition 135, as applicable. [40 CFR 60.8(a)]

136.b. The permittee shall demonstrate compliance with the NOx emission limit contained in Condition 135 one time per calendar year per turbine, using EPA Method 20 in accordance with 40CFR60.335. If the results from the first source test or two subsequent consecutive source tests on a turbine are less than 75% of the emission limit, no further testing will be required on that turbine during this permit term. The minimum time between tests shall be six months.

136.c. Within 180 days after initial start up of a turbine at this facility, the permittee shall perform emissions factor verification by performing testing in accordance with the table below:

EU60	Pollutant	Test method	Frequency
For each turbine	PM	OR Method 5	1 time per permit term
	NO_X	EPA Method 20*	1 time per permit term
	CO	EPA Method 10	1 time per permit term
	VOC	EPA method 25a	1 time per permit term

* This testing may be met using the NSPS required testing

136.d. Emission factors for calculating emissions PM, NOx, CO and VOC from each turbine as required in Condition 151.d (PSEL Monitoring) shall be 1.1 times the average test results obtained during the first performance/emission factor verification test. SO_2 emissions shall be calculated by mass balance per Condition 151.g.

136.e. The following parameters must be monitored and recorded during the source test:
136.e.i. Turbine power output or load.
136.e.ii. Fuel usage rate.

136.f. All tests for NOx emissions from EU60 must be conducted in accordance with 40 CFR Part 60.

136.g. Tests for emissions from EU60 other than NOx shall be performed in accordance with the Source Testing and Emission Factor Verification Procedure set forth in the TEST METHODS AND PROCEDURES SECTION of this permit and the Department-approved Quality Assurance Plan, as amended.

136.h. A pretest plan must be submitted at least 15 days in advance and approved by the Regional Source Test Coordinator. Test data and results must be submitted for review to the Regional Source Test Coordinator within 45 days unless otherwise approved in the pretest plan.

136.i. Only regular operating staff may adjust the combustion system or production processes and emission control parameters during the source test and within two hours prior to the tests. Any operating adjustments made during the source test, which are a result of consultation during the tests with source testing personnel, equipment vendors or consultants, may render the source test invalid.

136.j. Recordkeeping: During each test, the permittee shall record the following information:

136.j.i. Turbine power output or load.
136.j.ii. Fuel usage rate.
136.j.iii. The results of all emissions tests.

NSPS General Provision Requirements

137. The permittee must comply with all applicable provisions of 40 CFR Subpart A, including but not limited to the following:

137.a. 60.7 Notification and recordkeeping

137.a.i. 60.7(a)(1) Notification of the date construction commences for the affected facility, postmarked no later than 30 days after such date.

137.a.ii. 60.7(a)(2) Notification of the anticipated date of initial startup, postmarked not more than 60 days nor less than 30 days prior to such date.

137.a.iii. 60.7(a)(3) Notification of the actual date of initial startup, postmarked within 15 days after such date.

137.a.iv. 60.7(b) The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction in the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

137.a.v. 60.7(f) The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments or maintenance performed on these systems or devices; and all other information required by 40 CFR Part 60, recorded in a permanent form, suitable for inspection.

END OF SECTION

EMISSIONS UNIT SPECIFIC LIMITATIONS – ELECTRICAL GENERATING DIESEL ENGINES (EU70)

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standards	Averaging Time	Testing Condition	Monitoring Condition
OAR 340-208-0110(2)(b)	138	Opacity	20% for 3 minutes in any one hour			140
OAR 340-228-0210(1)(b)	139	PM	0.1 gr/dscf			140
OAR 340-228-0110(2)	141	Fuel sulfur content	0.5% by weight			143
OAR 340-226-0130	142	TACT determination	Maximum fuel sulfur content 0.05% by weight			143
OAR 340-226-0130	144	TACT determination	Emission control equipment			n/a

138. Applicable Requirement: The permittee shall not cause or allow the emissions of any air contaminant into the atmosphere from emissions unit EU70 for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 20% opacity, excluding uncombined water. [OAR 340-208-0110(2)(b)]

139. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter in excess of 0.1 grain per standard cubic foot from emissions unit EU70, corrected to 12% CO_2 or 50% excess air, as a three-hour average. [OAR 340-228-0210(1)(b)]

140. Monitoring Requirement: The permittee shall monitor visible emissions from emissions unit EU70 in accordance with the following:

140.a. During each period of fuel oil usage, the permittee shall use the following monitoring schedule for conducting the visible emissions surveys:

140.a.i. Within two hours of beginning a period of operation (excluding start up periods), or as soon as possible if conditions such as inclement weather or darkness make observations impossible within two hours, the permittee shall use Method 22 to determine if visible emissions are occurring.

140.a.i.(1) If visible emissions are observed, the permittee shall take immediate corrective actions to eliminate or reduce the visible emissions, and perform the procedures in Condition140.a.ii;

140.a.i.(2) If no visible emissions are observed, no further action is required.

140.a.ii. The permittee shall use Method 22 to determine if visible emissions are occurring within 24 hours of the initial observation;

140.a.ii.(1) If visible emissions are again observed, the permittee shall take immediate corrective actions to eliminate or reduce the visible emissions, and shall repeat this procedure each day until the requirements of Condition 140.a.ii.(2) can be accomplished; and

140.a.ii.(2) The permittee shall use Method 9 to determine compliance with the opacity limitation not later than the following weekday (Monday through Friday, excluding holidays).

140.a.iii. Once per month thereafter until each period of continuous operation ends, the permittee shall use Method 22 to determine if visible emissions are occurring.

140.a.iii.(1) If visible emissions are observed, the permittee shall take immediate corrective actions to eliminate or reduce the visible emissions, and perform the procedures in Condition 140.a.ii;
140.a.iii.(2) If no visible emissions are observed, no further action is required.

140.b. Recordkeeping: The permittee shall record the results of all visible emission monitoring for EU70 and all corrective actions taken.

141. Applicable Requirement: The permittee shall not use any liquid fuel in EU70 containing more than 0.5 percent sulfur by weight. [OAR 340-228-0110(2)]

142. Applicable Requirement: The permittee shall not use any liquid fuel in EU70 containing more than 0.05 percent sulfur by weight. This is a TACT determination made in accordance with OAR 340-226-0130. [OAR 340-226-0130]

143. Monitoring Requirement: The permittee shall monitor the sulfur content of each batch (e.g., barge, truck load, etc.) of fuel for the diesel generators received by:

143.a. obtaining a sulfur analysis certificate from the vendor for each batch; or

143.b. analyzing or having analyzed by a contract laboratory a monthly composite of representative samples taken by the permittee from each batch of fuel received.

143.c. Liquid fuels shall be analyzed using ASTM D129-64, D1552-83, or D4057-81 or the current equivalent method(s).

143.d. Recordkeeping: The permittee shall maintain records of sulfur analysis certificates and/or sulfur analysis results.

144. Applicable Requirement: Not later than January 1, 2002, all diesel powered generators used for non-emergency power generation must be equipped with an exhaust emission control system or systems that are designed and certified by the manufacturer(s) to reduce emissions of Particulate Matter (PM), Carbon Monoxide (CO) and Volatile Organic Compounds (VOC*). This is a TACT determination made in accordance with OAR 340-226-0130. [OAR 340-226-0130]

144.a. Particulate filters alone do not satisfy this requirement. The control system must be specifically designed to reduce CO and VOC* as well as PM.

144.b. The use of fuel catalysts does not satisfy this requirement, unless the manufacturer or supplier demonstrates to the Department's satisfaction, through rigorous testing,

that the fuel catalyst is at least as effective as exhaust emission control systems in reducing emissions of PM, CO and VOC*.

144.c. * Total Organic Carbon (TOC) or Non-Methane Hydrocarbons (NMHC) may be specified in lieu of VOC.

END OF SECTION

EMISSIONS UNIT SPECIFIC LIMITATIONS - INSIGNIFICANT ACTIVITIES

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standards	Averaging Time	Testing Condition	Monitoring Condition
340-234-0210(4)	145	opacity	20%			
340-228-0210(1)(b)	146	PM/PM_{10}	0.1 gr/dscf			
340-226-0210(2)	147	PM/PM_{10}	0.1 gr/dscf			
340-234-0210(1)(e)(A)	148	TRS	0.156 lb/ton daily arithmetic average			

145. Applicable Requirement: The permittee shall not cause or allow the emissions of any air contaminant into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 20% opacity, excluding uncombined water, from any categorically insignificant activity or any activity included in the aggregate insignificant emissions. [OAR 340-234-0210(4)]

146. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter, for any three-hour average period, in excess of 0.1 grains per dry standard cubic foot, corrected to 12% CO_2 or 50% excess air, from any fuel burning equipment and refuse burning equipment that is a categorically insignificant activity or any activity included in the aggregate insignificant emissions. [OAR 340-228-0210(1)(b)]

147. Applicable Requirement: The permittee shall not cause or allow the emission of particulate matter, for any three-hour average period, in excess of 0.1 grains per dry standard cubic foot, from any non-fugitive air contaminant source other than fuel burning and refuse burning equipment that is a categorically insignificant activity or any activity included in the aggregate insignificant emissions. [OAR 340-226-0210(2)]

148. Applicable Requirement: The permittee shall not cause or allow the emission of total reduced sulfur in excess of 0.156 pound/ton of production from any categorically insignificant activity or any activity included in the aggregate insignificant emissions in addition to the "other sources" listed in condition 55 as a daily arithmetic average in accordance with OAR 340-234-0210(1)(e)(A). [state-only enforceable pending EPA of Section 111 (d) Plan]

END OF SECTION

PLANT SITE EMISSION LIMITS

149. Applicable Requirement: The plant site emissions shall not exceed the following limits in any 12 consecutive calendar month period: [OAR 340-222-0020 and 340-222-0040]:

Pollutant	Plant Site Emission Limits	Components of the PSEL		
	Any 12 consecutive calendar month period	Assigned	Unassigned	Credits
	(ton/yr)	(tons/yr)	(tons/yr)	(tons/yr)
PM	1560	1560	109	0
PM_{10}	1560	1560	109	0
TRS	78	78	0	0
CO	2480	2480	4198	0
NO_x	2165	2165	0	0
SO_2	1262	1262	618	0
VOC	841	841	22	0
Lead	0.1	0.1	0	0

149.a. The permittee may only use the unassigned PSEL after any necessary construction (OAR 340-218-0190) and/or permit revision applications (OAR 340-218-0120 through 340-218-0180) have been approved by the Department.

149.b. The permittee does not have to pay fees on unassigned PSEL.

150. Applicable Requirement: The annual plant site emissions of hazardous air pollutants for fee purposes only are the following [OAR 340-222-0060]:

EU ID	Hazardous Air Pollutant	tons/year
EU07	Chlorine	1
EU35	Hydrogen chloride	54

151. Monitoring Requirement: The permittee shall determine compliance with the Plant Site Emission Limits established in condition 149 of this permit by conducting monitoring in accordance with the following procedures, test methods, and frequencies:

151.a. The permittee shall use a combination of CEMS data (condition 151.b), production rates with emission factors (condition 151.c) and material balance (condition 155) to calculate the facility-wide plant site emissions.

151.b. The permittee shall use the CEMS data to calculate plant site emissions as follows:

151.b.i. Emissions shall be calculated on a daily and rolling 12 calendar month basis. Emissions calculations shall be updated no more than 30 days after the end of each calendar month.

151.b.ii. Daily PM emissions from EU24 (Recovery Furnace) shall be calculated per condition 26.a.ii.

151.b.iii. Daily TRS emissions from EU24 (Recovery Furnace) shall be calculated per condition 19.d.

151.b.iv. Daily TRS emissions from EU21 (Lime Kiln) shall be calculated per condition 33.

151.b.v. Daily flow rate for EU35 (FBB) monitored per condition 93. The moisture content shall be calculated as the average moisture content determined in the 5 most recent source tests.

151.b.vi. The pollutant concentration measurements obtained in conditions 84, 87, and 89.

151.c. For the emissions units listed in condition 151.h, the permittee shall calculate plant site emissions using the following equation and multiplying the process parameter by the emission factor listed below for each pollutant:

$$E = \Sigma (P_{eu} \times EF_{eu})$$

where:

E = Emissions, pounds/day or tons/year

P_{eu} = Process parameter for each emissions unit, units/day or units/year as identified in condition 151.h, and

EF_{eu} = Emission factor for each emissions unit, pounds/units as identified in condition 151.h

151.d. For EU60 (gas turbines), the permittee shall calculate plant site emissions of PM, NOx, CO and VOC from each turbine using the following equation:

$$E = \Sigma (P_{eu} \times EF_{eu})$$

where:

E = Emissions, pounds/day or tons/year

P_{eu} = Hours of operation, hours/day or hours/year

EF_{eu} = Emission factor for each pollutant as determined in Condition 136.d

151.e. The permittee shall maintain monthly records of the process parameters identified in condition 151.h.

151.f. The VOC plant site emissions calculated using material balance in condition 155 shall be added to the VOC plant site emissions calculated in 151.c for monitoring compliance with the facility-wide VOC PSEL.

151.g. The SO_2 plant site emissions calculated using the material balance below shall be added to the SO_2 plant site emissions calculated in 151.c for monitoring compliance with the facility-wide SO_2 PSEL if material balance is used for to calculate SO_2 emissions.

$E = 2*F*S$ = emissions of SO_2;

where

S = sulfur content, %

F = fuel used, lbs/month or tons/yr; and

2 = $\frac{64 \text{ lbs } SO_2/\text{mole}}{32 \text{ lbs S/mole}}$

151.h. The following tables contains process parameters and emission factors for calculating the plant site emissions:

EU ID	Pollutant	Process Parameter	Units	Short Term EF	Annual EF	Units	EF Verification Testing	
							Test Method	Frequency
EU02	VOC	pulp production	ADTP	0.35	0.35	lb/ADTP	Method 25A, 25B	once/permit term
EU06	VOC	pulp production	ADTP	0.015	0.015	lb/ADTP	Not required	
EU07	VOC	pulp production	ADTP	0.0073	0.0073	lb/ADTP	Not required	
EU16 PR-202 PR-207 PR-210 PR-211	VOC	pulp production	ADTP	0.025	0.025	lb/ADTP	Not required	
EU16 PR-218	VOC	pulp production	ADTP	1	1	lb/ADTP	Method 25A, 25B	twice/permit term
EU21	PM	equivalent pulp production	ADTP	1.0	0.73	lb/ADTP	DEQ Method 5	once/permit term
	CO	equivalent pulp production	ADTP	0.1	0.1	lb/ADTP	Method 10	once/permit term
	NO_x	equivalent pulp production	ADTP	1	1	lb/ADTP	Method 7E	twice/permit term
	SO_2	equivalent pulp production	ADTP	0.2	0.2	lb/ADTP	Method 6 or 6C	twice/permit term
	VOC	equivalent pulp production	ADTP	0.25	0.25	lb/ADTP	Method 25A, 25B	twice/permit term
EU23	PM/PM_{10}	natural gas usage	cubic feet	13.7	13.7	lb/MMft3	Not required	
	CO	natural gas usage	cubic feet	70	70	lb/MMft3	Not required	
	NO_x	natural gas usage	cubic feet	140	140	lb/MMft3	Not required	
	SO_2	pulp production during EU23 use	ADTP during EU23 use	4.8	4.8	lb/ADTP	Method 6 or 6C	twice/permit term
	SO_2	natural gas usage	cubic feet	3.8	2.6	lb/MMft3	Not required	
	VOC	natural gas usage	cubic feet	2.8	2.8	lb/MMft3	Not required	

EU ID	Pollutant	Process Parameter	Units	Short Term EF	Annual EF	Units	EF Verification Testing	
							Test Method	Frequency
EU24	CO	equivalent pulp production	ADTP	20	20	lb/ADTP	Method 10	twice/permit term
	NO_x	equivalent pulp production	ADTP	2	2	lb/ADTP	Method 7E	twice/permit term
	NO_x	natural gas usage	cubic feet	550	92	lb/MMft3		
	SO_2	equivalent pulp production	ADTP	9.74	2.56	lb/ADTP	Method 6 or 6C	twice/permit term
	VOC	equivalent pulp production	ADTP	0.826	0.826	lb/ADTP	Method 25A, 25B	twice/permit term
	VOC	natural gas usage	cubic feet	1.4	1.4	lb/MMft3		
EU25	PM	equivalent pulp production	ADTP	0.5	0.5	lb/ADTP	DEQ Method 5	twice/permit term
	NO_x	equivalent pulp production	ADTP	0.044	0.044	lb/ADTP	Not required	
	SO_2	equivalent pulp production	ADTP	0.2	0.2	lb/ADTP	Method 6 or 6C	twice/permit term
	TRS	equivalent pulp production	ADTP	0.047	0.047	lb/ADTP	Method 16A/6C	twice/permit term
	VOC	equivalent pulp production	ADTP	0.059	0.059	lb/ADTP	Method 25A, 25B	once/permit term
EU28 PR-816	VOC	pulp production	ADTP	0.04	0.04	lb/ADTP	Not required	
EU28 PR-820	VOC	pulp production	ADTP	0.04	0.04	lb/ADTP		

EU ID	Pollutant	Process Parameter	Units	Short Term EF	Annual EF	Units	EF Verification Testing	
							Test Method	Frequency
EU33	PM/PM_{10}	oil usage	gallons	20.5	17	lb/kgal	DEQ Method 5	twice/permit term
	PM/PM_{10}	natural gas usage	cubic feet	2.5	2.5	lb/MMft3	Not required	
	CO	oil usage	gallons	1.22	1.02	lb/kgal	Per condition 71	
	CO	natural gas usage	cubic feet	1.3	1.1	lb/MMft3	Method 10	once/permit term
	NO_x	oil usage	gallons	142	118	lb/kgal	Per condition 71	
	NO_x	natural gas usage	cubic feet	679	488	lb/MMft3	Method 7E	once/permit term
	SO_2	oil usage	gallons	274.8	219.8	lb/kgal	Not required	
	SO_2	natural gas usage	cubic feet	3.8	2.6	lb/MMft3		
	VOC	oil usage	gallons	1	0.82	lb/kgal	Not required	
	VOC	natural gas usage	cubic feet	1	0.1	lb/MMft3		
	Pb	Oil usage	Gallons	0.00133	0.00133	lb/kgal		
EU34	PM/PM_{10}	natural gas usage	cubic feet	2.5	2.5	lb/MMft3	Not required	
	CO	natural gas usage	cubic feet	928	773	lb/MMft3	Method 10	once/permit term
	NO_x	natural gas usage	cubic feet	473	394	lb/MMft3	Method 7E	once/permit term
	SO_2	natural gas usage	cubic feet	3.8	2.6	lb/MMft3	Not required	
	VOC	natural gas usage	cubic feet	1.4	1.4	lb/MMft3	Not required	

EU ID	Pollutant	Process Parameter	Units	Short Term EF	Annual EF	Units	EF Verification Testing	
							Test Method	Frequency
EU35	PM/PM_{10}	air flow rate	dscfm	.03	.03	gr/dscf	DEQ Method 5	annual
	VOC	air flow rate	dscfm	50	50	ppm	Method 25A, 25B	once/permit term
EU37a	PM/PM_{10}	air flow rate	scfm	0.1	0.1	gr/dscf	Not required	
EU38	PM/PM_{10}	air flow rate	scfm	0.066	0.05	gr/dscf	Not required	
EU38a PR-368	PM/PM_{10}	air flow rate	scfm	0.132	0.1	gr/dscf	Not required	
EU38a PR-376	PM/PM_{10}	air flow rate	scfm	0.2	0.2	gr/dscf		

EU ID	Pollutant	Process Parameter		Units	Short Term EF	Annual EF	Units	EF Verification Testing	
								Test Method	Frequency
EU39	PM/PM_{10}	natural gas usage		cubic feet	13.7	13.7	lb/MMft3	DEQ Method 5	See Condition 116
	PM/PM_{10}	air flow rate		scfm	0.066	0.05	Gr/dscf		
	CO	natural gas usage	existing burners:	cubic feet	35	35	lb/MMft3	Method 10	See Condition 116
			PR-404, PR-413:	MMBtu	0.43	0.43	lb/MMBtu	Method 10	
			PR-605:	MMBtu	0.19	0.19	lb/MMBtu	Method 10	
	NO_x	natural gas usage	existing burners:	cubic feet	140	140	lb/MMft3	Method 7E	See Condition 116
			low-NOx burners:	MMBtu	0.0913	0.0913	lb/MMBtu		
			#6 PM "predryers":	MMBtu	0.127	0.127	lb/MMBtu		
	SO_2	natural gas usage		cubic feet	3.8	2.6	lb/MMft3	Not required	
	VOC	natural gas usage	existing burners:	cubic feet	2.8	2.8	lb/MMft3	Not required	
			low-NOx burners:	MMBtu	0.062	0.062	lb/MMBtu		
EU40	VOC	paper production		MDTP	0.031	0.031	lb/MDTP	Not required	
EU41	PM/PM_{10}	air flow rate		scfm	0.066	0.05	Gr/dscf	Not required	
EU41 PR-533 PR-539	VOC	paper production		MDTP	0.031	0.031	lb/MDTP	Method 25A, 25B	once/permit term
EU41 PR-522 PR-508	VOC	paper production		MDTP	0.044	0.044	lb/MDTP	Method 25A, 25B	once/permit term

EU ID	Pollutant	Process Parameter	Units	Short Term EF	Annual EF	Units	EF Verification Testing	
							Test Method	Frequency
EU42	PM/PM_{10}	air flow rate	scfm	0.05	0.027	gr/dscf	Not required	
	CO	natural gas usage	cubic feet	35	35	lb/MMft3	Not required	
	CO	propane usage	cubic feet	35	35	lb/MMft3		
	NO_x	natural gas usage	cubic feet	140	140	lb/MMft3	Method 7E	once/permit term
	NO_x	propane usage	cubic feet	140	140	lb/MMft3		
	SO_2	natural gas usage	cubic feet	3.8	2.6	lb/MMft3	Not required	
	SO_2	propane usage	cubic feet	3.8	2.6	lb/MMft3		
	VOC	natural gas usage	cubic feet	4.75	4.75	lb/MMft3	Not required	
	VOC	propane usage	cubic feet	4.75	4.75	lb/MMft3		
EU43 paved roads	PM/PM_{10}	pulp production	ADTP	0.077	0.077	lb/ADTP	Not required	
EU43 unpaved roads	PM/PM_{10}	pulp production	ADTP	0.067	0.067	lb/ADTP		

EU ID	Pollutant	Process Parameter	Units	Short Term EF	Annual EF	Units	EF Verification Testing	
							Test Method	Frequency
EU44 chip pile	PM/PM_{10}	pulp production	ADTP	0.027	0.027	lb/ADTP	Not required	
EU44 bark pile	PM/PM_{10}	pulp production	ADTP	0.0029	0.0029	lb/ADTP		
EU44 sludge pile	PM/PM_{10}	pulp production	ADTP	0.0022	0.0022	lb/ADTP		
EU44 FBB bark pile	PM/PM_{10}	pulp production	ADTP	0.0022	0.0022	lb/ADTP		
EU44 bark pile	VOC	pulp production	ADT	0.0071	0.0071	lb/ADTP		
EU44 FBB bark pile	VOC	pulp production	ADT	0.0069	0.0069	lb/ADTP		
EU44 chip pile	VOC	pulp production	ADT	0.182	0.182	lb/ADTP		
EU47 chip blowers	PM/PM_{10}	pulp production	ADTP	0.0013	0.0013	lb/ADTP	Not required	
EU47 main chip dump	PM/PM_{10}	pulp production	ADTP	0.00053	0.00053	lb/ADTP		
EU47 portable chip dump	PM/PM_{10}	pulp production	ADTP	0.00008	0.00008	lb/ADTP		
EU47 peco crane	PM/PM_{10}	pulp production	ADTP	0.00013	0.00013	lb/ADTP		

EU ID	Pollutant	Process Parameter	Units	Short Term EF	Annual EF	Units	EF Verification Testing	
							Test Method	Frequency
EU50	PM/PM_{10}	air flow rate	scfm	0.1	0.077	gr/dscf	Not required	
EU51	PM/PM_{10}	air flow rate	scfm	0.1	0.077	gr/dscf	Not required	
EU52 PR-220	PM/PM_{10}	air flow rate	scfm	0.1	0.072	gr/dscf	Not required	
EU52 PR-302	PM/PM_{10}	air flow rate	scfm	0.1	0.007	gr/dscf		
EU53 general	VOC	pulp production	ADTP	0.0185	0.0185	lb/ADTP	Not required	
EU53 kraft pulping	VOC	pulp production	ADTP	0.0170	0.0170	lb/ADTP		
EU53 liquor recovery	VOC	pulp production	ADTP	0.0811	0.0811	lb/ADTP		
EU53 softwood bleaching	VOC	pulp production	ADTP	0.0721	0.0721	lb/ADTP		
EU53 hardwood bleaching	VOC	pulp production	ADTP	0.0056	0.0056	lb/ADTP		
EU53 groundwood pulping	VOC	pulp production	ADTP	0.0047	0.0047	lb/ADTP		
EU70 diesel engines	PM/PM_{10}	hours of operation	hours	0.049	0.049	G/hp-hr	Not required	
	CO	hours of operation	hours	0.38	0.38	G/hp-hr		
	NO_x	hours of operation	hours	2.6	2.6	G/hp-hr		
	VOC	hours of operation	hours	0.068	0.068	G/hp-hr		

152. Monitoring Requirement: The emissions factors listed in condition 151.h are not enforceable limits unless otherwise specified in this permit. Compliance with PSELs shall only be determined by the calculations contained in condition 151.a of this permit using the measured process parameters recorded during the reporting period and the emission factors contained in condition 151.h.

153. Monitoring Requirement: The permittee shall maintain a computer system that tracks all emissions unit plant site emissions that comprise the facility-wide PSEL. The computer system shall perform the calculations required in condition 151.c and perform the summation. The computer system shall be available for inspection by Department personnel.

154. Monitoring Requirement: The permittee shall conduct emission factor verification tests in accordance with the Department's Source Sampling Manual for the PM, CO, NO_x, SO_2, and VOC emission factors using the test methods and minimum test frequencies listed in condition 151.h except as provided in conditions 71 and 154.c.

154.a. Source testing to verify emission factors shall be conducted at 90 to 110 percent of the maximum operating rate.

154.b. When two source tests are required during the permit term, the tests shall be separated by a minimum period of one (1) year unless annual testing is required, which shall be separated by a minimum period of six (6) months.

154.c. Once per permit term while burning natural gas, the following procedures and test methods shall be used to verify emission factors for emissions unit EU33 at monitoring point DP831:

154.c.i. EPA Method 10 shall be used measure carbon monoxide emissions.

154.c.ii. EPA Method 7E shall be used to measure nitrogen oxide.

154.c.iii. During each source test, the permittee shall record fuel type and usage.

154.d. The following procedures and test methods shall be used to verify emission factors for emissions unit EU34 once per permit term:

154.d.i. EPA Method 10 shall be used to measure carbon monoxide emissions;

154.d.ii. EPA Method 7E shall be used to measure nitrogen oxide emissions;

154.d.iii. During each source test, the permittee shall record fuel type and usage.

154.e. The permittee shall notify the Department at least 15 days prior to conducting any emission factor verification tests by submitting a source test plan in accordance with the Department's Source Sampling Manual. The permittee is not required to

submit a source test plan if a plan has already been approved for the emissions unit and the pollutant to be tested.

154.f. The permittee shall submit a summary of all emission factor verification tests to the Department within 45 days of any test. The summary shall include the following information:

154.f.i. Emissions unit and monitoring point identification;
154.f.ii. Emission factors in the same units as in the table above;
154.f.iii. Emission results in pounds per hour;
154.f.iv. Process parameters during the test (e.g., material throughput, types and amounts of fuels, heat input, etc.); and
154.f.v. Control device operating parameters, if applicable.

155. Montoring Requirement: The permittee shall monitor emissions from emissions unit EU54 using the following calculations:

155.a. The permittee shall maintain records of the amount of materials used at emissions unit EU54 for each month.

155.b. The VOC content of the materials shall be determined by material safety data sheets. If a range of VOC content is given, the middle of the range shall be used to calculate emissions.

155.c. Emissions shall be monitored using the following equation:

$V = \%V_u \times M_u \times \rho_u$

Where:

V = volatile organic compounds emissions, lbs/month;
$\%V_u$ = percent VOC of material used in the process, wt/wt;
M_u = material used in the process, gallons/month; and
ρ_u = density of material used in process, lb/gallon.

155.d. The VOC plant site emissions calculated using this material balance shall be added to the VOC plant site emissions calculated in condition 151.c for monitoring compliance with the facility-wide VOC PSEL.

155.e. Recordkeeping The permittee shall maintain records of VOC usage for EU54.

156. Monitoring Requirement: A comprehensive Quality Assurance Plan (QAP) for all emissions monitoring shall be maintained by the permittee. An update to the QAP shall be submitted to the Department for review within 60 days after issuance of this permit. The QAP shall include all elements required to insure the integrity of all required emissions and ambient monitoring data. At least annually, the Department shall be notified of any changes to the QAP.

END OF SECTION

TEST METHODS AND PROCEDURES

VISIBLE EMISSIONS MONITORING PROCEDURE

157. The permittee shall monitor visible emissions as required for each affected Emissions Unit in accordance with the following procedures, test methods, and at the frequency specified for each affected Emissions Unit, unless otherwise specified in this permit:

157.a. The permittee shall conduct a six-minute visible emissions survey following the general procedures outlined in EPA Method 22. Condensed water vapor is not considered an emission for the purposes of this survey method. The visible emissions surveys will be performed by employees or contractors of the permittee who have been trained in the general procedures for determining the presence of visible emissions.

157.b. If the observer is unable to conduct the survey and/or Method 9 tests due to visual interferences caused by other visible emissions sources (e.g., fugitive emissions during high wind conditions) or due to weather conditions such as fog, heavy rain, or snow which impair visibility, the observer shall note such conditions on the data observation sheet and make at least three attempts to conduct the surveys and/or tests at approximately 2 hour intervals throughout the day. If the visible emissions survey and/or test could not be conducted on the regularly scheduled day due to interferences, the observer shall conduct the test as soon as reasonably possible.

157.c. If visible emissions are identified for more than 5% of the survey time (18 seconds), EPA Method 9 shall be used to determine opacity in accordance with the Department's Source Sampling Manual. The Method 9 opacity readings shall be conducted on the affected monitoring point within 24 hours. Each Method 9 observation period shall be for a minimum of six minutes unless any one reading is greater than 20% opacity, in which case the observation period shall be for a minimum of 60 minutes or until a violation of the emissions standard(s) is documented, whichever is a shorter period.

157.d. Prior notification and a pre-test plan are not required to be submitted to the Department for each visible emissions survey or Method 9 test.

SOURCE TESTING AND EMISSON FACTOR VERIFICATION PROCEDURE

158. If source testing and/or emission factor verification is required, the permittee shall use the following procedures, unless otherwise specified in this permit or approved in writing by the Department:

158.a. The permittee shall conduct all testing in accordance with the Department's Source Sampling Manual. [OAR 340-212-0120]

158.b. Only regular operating staff may adjust the processes or emission control device parameters during a compliance source test and within two (2) hours prior to the

tests. Any operating adjustments made during a compliance source test, which are a result of consultation during the tests with source testing personnel, equipment vendors, or consultants, may render the source test invalid.

158.c. All compliance source tests shall be performed at 90 to 110% of the normal maximum operating rate.

158.d. Each source test shall consist of at least three (3) test runs and the emissions results shall be reported as the arithmetic average of all valid test runs. For a source test to be accepted, there must be at least two valid test runs.

158.e. The permittee shall notify the Department at least 15 days prior to conducting any source tests or emission factor verification tests by submitting a source test plan in accordance with the Department's Source Sampling Manual. The permittee is not required to submit a source test plan if a plan has already been approved for the emissions unit and the pollutant to be tested.

158.f. The permittee shall submit a summary of all source tests and emission factor verification tests to the Department within 45 days of any test. The summary shall include the following information:

158.f.i. Emissions unit and monitoring point identification;
158.f.ii. Emission results in units that are consistent with the emissions limits on the emissions unit(s) being tested (e.g., gr/dscf, lb/hour, lb per unit throughput, etc.);
158.f.iii. Process parameters during the test (e.g., material throughput, types and amounts of fuels used, heat input, etc.); and
158.f.iv. Control device operating parameters, if applicable.

END OF SECTION

RECORDKEEPING REQUIREMENTS [OAR 340-218-0050(3)(b)]

159. In addition to the recordkeeping specified elsewhere in this permit, the permittee shall maintain the following specific records when applicable:

159.a. occurrence and length of downtime for all pollution control devices listed in the Detailed Listing of Emissions Units (page 86).

160. The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

END OF SECTION

REPORTING REQUIREMENTS

161. The permittee shall report the following information within 30 days of the end of each calendar month to the Department:

161.a. daily average emissions of TRS gases expressed in parts per million of H_2S on a dry gas basis with oxygen concentrations, if oxygen corrections are required from emissions units EU21 and EU24;
161.b. daily average emissions of TRS gases in pounds of total reduced sulfur per equivalent ton of pulp process, expressed as H_2S from emissions units EU21 and EU24;
161.c. three-hour average emissions of SO_2 based on all samples collected in one sampling period from the recovery furnace, expressed as ppm, dry basis;
161.d. all daily average opacities for each recovery furnace stack where transmissometers are used;
161.e. the number of 6-minute average opacities from each recovery furnace stack that exceeds 35% opacity;
161.f. daily average pounds of particulate matter per equivalent ton of pulp produced for each recovery furnace;
161.g. results of each recovery furnace particulate matter source test in grains per dry standard cubic foot and for the same source test period, the hourly average opacity;
161.h. the equation developed for the correlation between opacity and grain loading and the correlation coefficient, r, if a particulate matter source test was performed for the month;
161.i. cumulative minutes of non-condensible gas bypass and any bypass periods that exceed 60 minutes; and
161.j. cumulative duration in hours each month of upsets for:
161.j.i. recovery furnace total reduced sulfur;
161.j.ii. recovery furnace total particulate;
161.j.iii. lime kiln total reduced sulfur;
161.j.iv. lime kiln total particulate;
161.j.v. smelt tank total particulate. [OAR 340-234-0260(3)]

162. Notwithstanding General Condition G.6.a. of this permit, the permittee shall make initial reports of excess emissions due to upsets, breakdowns, startups, and shutdowns via phone, voice mail or fax by 9:00 am on the first business day following the date on which the excess emission occurred. Business days are Monday through Friday, excluding holidays observed by the Department. [OAR 340-214-0330(2)(a)]

163. If requested by the Department, upsets shall also be reported in writing with an accompanying report on measures taken or to be taken to correct the condition and prevent reoccurrence within five (5) working days of the request. [OAR 340-234-0260(2)]

164. The permittee shall submit a quarterly report containing the information required below for each EU35 operating day to both the Department and the EPA Administrator. All

quarterly reports shall be postmarked not later than the 30th day following the end of each calendar quarter. [40 CFR 40 CFR 60.49b(g) and (i)]

164.a. calendar date;
164.b. average hourly nitrogen oxides emission rates (expressed as NO_2) (lb/MMBtu heat input) measured;
164.c. 30-day average nitrogen oxides emission rates (lb/MMBtu heat input) calculated at the end of each EU35 operating day from the measured hourly nitrogen oxide emission rates for the preceding 30 operating days;
164.d. identification of the EU35 operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under condition 85, with the reasons for such excess emissions as well as a description of corrective actions taken;
164.e. identification of the EU35 operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;
164.f. identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;
164.g. identification of "F" factor, defined in EPA Method 19 (40 CFR 60, Appendix A), used for calculations, method of determination, and type of fuel combusted;
164.h. identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system;
164.i. description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3 (40 CFR 60, Appendix B).
164.j. results of daily CEMS drift tests and quarterly accuracy assessments as required under the Department's Continuous Monitoring Manual.

165. The permittee shall submit excess emission reports for any calendar quarter during which there are excess emissions from emissions unit EU35 of the standards contained in condition 85. If there are no excess emissions during the calendar quarter, the permittee shall submit a report semiannually stating that no excess emissions occurred during the semiannual reporting period. [40 CFR 60.49b(h)]

165.a. The permittee may reduce the frequency of quarterly excess emissions and monitoring systems performance reporting for that standard to semiannual if the following conditions are met:

165.a.i. For one (1) full year (e.g., 4 quarterly) the facility's excess emissions and monitoring systems reports submitted to comply with condition 85 continually demonstrate that the facility is in compliance;

165.a.ii. The permittee continues to comply with all recordkeeping and monitoring requirements specified in conditions 73, 75, and 87; and

165.a.iii. The Department or the EPA Administrator does not object to a reduced frequency of reporting for the facility, as provided in the following condition. [40 CFR 60.7(e)(1)]

165.b. The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the permittee notifies the Department in writing of his or her intention to make such a change and the Department does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Department may review information concerning the sources entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of a permittee's conformance with operation and maintenance requirements. Such information may be used by the Department or the EPA Administrator to make a judgment about the source's potential for noncompliance in the future. If the Department disapproves the permittee's request to reduce the frequency of reporting, the Department will notify the permittee in writing within 45 days after receiving notice of the permittee's intention. The notification from the Department to the permittee will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted. [40 CFR 60.7(e)(2)]

165.c. As soon as monitoring data indicate that emissions unit EU35 is not in compliance with any emission limitation or operating parameter specified in condition 85, the frequency of reporting shall revert back to quarterly, and the permittee shall submit an excess emissions and monitoring systems performance report (and summary report) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the permittee may again request approval from the Department to reduce the frequency of reporting as provided for above. [40 CFR 60.7(e)(3)]

166. The permittee shall submit four (4) copies of the semi-annual monitoring report, covering the period from January 1 to June 30, using Department approved forms, by July 30, unless otherwise approved in writing by the Department. One copy of the report shall be submitted to the Air Quality Division, two copies to the regional office, and one copy to the EPA Region X office. The semi-annual monitoring report shall include the semi-annual compliance certification.

167. The permittee shall submit four (4) copies of the annual monitoring report, using Department approved forms, by March 15. One copy of the report shall be submitted to the Air Quality Division, two copies to the regional office, and one copy to the EPA Region X office.

168. The annual monitoring report shall consist of:

168.a. specific reporting requirements:
- 168.a.i. for the purpose of this condition, "annual" means calendar year (January through December);
- 168.a.ii. annual records of production;
- 168.a.iii. annual records of the amount of fuels used;
- 168.a.iv. annual hours of operation;

168.b. the emission fee report;
168.c. the excess emissions upset log; [OAR 340-214-0340] and

168.d. the second semi-annual compliance certification, covering the period from July 1 to December 31. [OAR 340-218-0080]

169. Addresses of regulatory agencies are the following, unless otherwise instructed:

DEQ - Northwest Region
2020 S.W. 4th Ave, #400
Portland, OR 97201-5884
(503) 229-5263

DEQ - Air Quality Division
811 SW Sixth Avenue
Portland, OR 97204
(503) 229-5359

Air Operating Permits
US Environmental Protection Agency
Mail Stop OAQ-084
1200 Sixth Avenue
Seattle, WA 98101

END OF SECTION

NON-APPLICABLE REQUIREMENTS

170. OARs currently determined not applicable to the permittee are listed below:

170.a. The following OARs are not applicable because the source is not in the source category cited in the rules:

202-0010, 202-0050, 202-0060, 202-0070, 202-0080, 202-0090, 202-0100, 202-0110, 202-0120, 202-0130, 202-0200, 202-0210, 202-0220,
204-0010, 204-0020, 204-0030, 204-0040, 204-0050, 204-0060, 204-0080, 204-0090,
210-0100, 210-0110, 210-0120, 210-0200, 210-0210, 210-0220,
218-0090, 218-0100,
230-0010, 230-0020, 230-0030, 230-0030, 230-0100, 230-0110, 230-0120, 230-0130, 230-0140, 230-0150, 230-0200, 230-0210, 230-0220, 230-0230, 230-0300, 230-0310, 230-0320, 230-0330, 230-0340, 230-0350, 230-0360, 230-0400, 230-0410,
232-0040, 232-0050, 232-0060, 232-0070, 232-0080, 232-0085, 232-0090, 232-0100, 232-0120, 232-0130, 232-0140, 232-0150, 232-0160, 232-0170, 232-0180, 232-0190, 232-0200, 232-0210, 232-0220, 232-0230, 232-0240,
234-0010, 234-0010, 234-0010, 234-0010, 234-0110, 234-0120, 234-0130, 234-0140, 234-0310, 234-0320, 234-0330, 234-0340, 234-0350, 234-0360, 234-0400, 234-0410, 234-0420, 234-0430, 234-0500, 234-0510, 234-0520, 234-0530,
236-0010, 236-0010, 236-0100, 236-0120, 236-0130, 236-0140, 236-0150, 236-0200, 236-0220, 236-0230, 236-0300, 236-0310, 236-0320, 236-0330, 236-0410, 236-0420, 236-0430, 236-0440, 236-0500,
238-0010, 238-0020, 238-0040, 238-0050, 238-0060, 238-0070, 238-0080, 238-0090, 238-0100,
242-0500, 242-0510, 242-0520,
244-0100, 244-0110, 244-0120, 244-0130, 244-0140, 244-0150, 244-0160, 244-0170, 244-0180,
248-0210,
256-0010, 256-0130, 256-0200, 256-0210, 256-0300, 256-0310, 256-0320, 256-0330, 256-0340, 256-0350, 256-0360, 256-0370, 256-0380, 256-0390, 256-0400, 256-0410, 256-0420, 256-0430, 256-0440,
258-0110, 258-0120, 258-0130, 258-0140, 258-0150, 258-0160, 258-0170, 258-0180, 258-0190, 258-0210, 258-0220, 258-0230, 258-0240, 258-0250, 258-0260, 258-0270, 258-0280, 258-0290, 258-0300 and 258-0400.

170.b. The following OARs are not applicable because the source does not have specific emissions units cited in the rules:

260-0030

170.c. The following OARs are not applicable because the source is outside the special control area, non-attainment area or county cited in the rules:

208-0500, 208-0510, 208-0520, 208-0530, 208-0540, 208-0550, 208-0560, 208-0570, 208-0580, 208-0590, 208-0600, 208-0610, 208-0620, 208-0630, 208-0640,

208-0650, 208-0660, 208-0670,
214-0200, 214-0210, 214-0220,
240-0100, 240-0110, 240-0120, 240-0130, 240-0140, 240-0150, 240-0160, 240-0170, 240-0180, 240-0190, 240-0200, 240-0210, 240-0220, 240-0230, 240-0240, 240-0250, 240-0260, 240-0270, 240-0300, 240-0310, 240-0320, 240-0330, 240-0340, 240-0350 and 240-0360.

170.d. The following OARs are not applicable because the source does not burn the fuel type cited in the rules:

340-228-0120.

170.e. The following OARs are not applicable because the source made no changes that would trigger the rule procedural requirements:

222-0050,
226-0400,
238-0050, 238-0070 and 238-0080.

171. Federal applicable requirements currently determined not applicable to the permittee are listed below:

40 CFR Part 55,
40 CFR Part 57,
40 CFR Part 60 (except subparts A and Db, and appendices),
40 CFR Part 61 (except subparts A, C, E, and M, and appendices),
40 CFR Part 63 (except subparts A, KK and S and appendices),
40 CFR Part 68,
40 CFR Parts 72, 73, 75, and 76,
40 CFR Part 82 (except subpart F),
40 CFR Parts 85 through 89,
Section 129 of the FCAA, Solid Waste,
Section 183(e) of the FCAA, Consumer and Commercial Products,
Section 183(f) of the FCAA, Tank Vessels.

172. Any other federal or state requirements not specifically mentioned in this permit are deemed non-applicable.

DETAILED LISTING OF EMISSIONS UNITS

Emissions Unit Description	EU ID	Pollution Control Device	PCD ID
Brownstock Washer Hood Vent DP331	**EU02**	None (Work Practice)	NA
Kamyr Knotters (1)			
Kamyr Brownstock Washers (2)			
Kamyr Brownstock Rewasher (1)			
M&D Knotters (1)			
M&D Brownstock Washers (2)			
M&D Brownstock Rewasher (1)			
Bleach plant #2 washer (E_{OP})			
Bleach plant #4 washer (post O_2)			
Oxygen Delignification DP190			
Bleach Plant Misc. Vents	**EU06**	None	NA
Decker Seal Tank DP332			
EOP Washer Seal Tank DP316			
D2 Stage Mixer Standpipe DP333			
EOP Tower Over Pressure Vent DP336			
Bleach Plant DP356	**EU07**	Bleach Plant Scrubber	CD356
Bleach Plant DO, D1, D2 Tower Vents, D0, D1 Washer Seal Tank Vents			
R8, ClO_2 Generator Tail Gas DP357			
D0 and D1 Bleach Plant Washers			
D1 Stage Mixer Standpipe DP338			
EOP Stage Mixer Standpipe DP339			
D0 Stage Mixer Standpipe DP340			
East and West Bleach Plant Sewer Vents			

Emissions Unit Description	EU ID	Pollution Control Device	PCD ID
Groundwood Mill	**EU16**	None	NA
Groundwood Storage Tanks DP202			
Groundwood Storage Tanks DP203			
Groundwood Storage Tanks DP204			
Groundwood Storage Tanks DP205			
Groundwood Storage Tanks DP206			
Groundwood Screen DP207			
Groundwood Screen DP209			
Groundwood High Density Stock Storage #1 DP210			
Groundwood High Stock Density Storage #2 DP211			
Groundwood Decker DP212			
Groundwood Decker DP213			
Groundwood Decker DP215			
Groundwood Decker DP216			
Groundwood Refiner Lines DP218			
Groundwood Refiner Lines DP219			
Lime Kiln DP372	**EU21**	Lime Kiln Venturi Scrubber	CD372

Emissions Unit Description	EU ID	Pollution Control Device	PCD ID
NCG Incinerator DP375	**EU23**	NCG Incinerator/Lime Kiln	CD375/EU21/ CD372
M&D Blow Tank DP301			
M&D ESCO Valve DP308			
#2 Kamyr Liquor Flash Tank DP303			
#1 Kamyr Liquor Flash Tank Safety Valve DP309			
Kamyr Blow Tank DP312			
Kamyr Low-Pressure Feeder DP314			
Kamyr Foam Tank DP271			
M&D Foam Tank DP270			
Blow Heat Condensers DP272, DP273			
Black Liquor Evaporator First Effect DP811			
Black Liquor Evaporator Second Effect DP812			
Black Liquor Evaporator First Effect Dome Relief Valve DP813			
Black Liquor Evaporator Second Effect Dome Relief Valve DP814			
Black Liquor Evaporator Hotwell Emergency Vent DP815			
Black Liquor Concentrator, First Body DP822			
Black Liquor Concentrator, First Body DP823			
Black Liquor Concentrator, Second Body Explosion Vent DP824			
Black Liquor Concentrator, NCG Vent Line DP825			
Recovery Furnace DP808, DP809	**EU24**	Electrostatic Precipitator	CD808
Smelt Dissolving Tank DP803	**EU25**	Smelt Tank Vent Control device	CD803

Emissions Unit Description	EU ID	Pollution Control Device	PCD ID
Black Liquor Storage and Process Vents	**EU28**	None	NA
Heavy Liquor Storage Tank #2 DP821			
Salt Cake Mix Tank DP804			
Precipitator Ash Mix Tank DP805			
Power Boiler DP831	**EU33**	None	NA
Package Boiler DP842	**EU34**	None	NA
Fluid Bed Boiler DP832	**EU35**	Fluid Bed Boiler Baghouse	CD832
Limestone Daybin DP835	**EU37a**	Limestone Daybin Baghouse	CD835
Ash Silo Transfer Receiver DP836		Ash Silo Baghouse	CD836
Saltcake Silo and Day Bin DP806		Salt Cake Silo Baghouse	CD806
#2 PM Winders DP408	**EU38**	#2 PM Rotoclone #1	CD408
		#2 PM Rotoclone #2	CD409
#1 PM Winders DP410		#1 PM Rotoclone #1	CD410
		#1 PM Rotoclone #2	CD411
#5 PM Calendar Stack/Reel DP606		#5 PM Venturi Scrubber	CD606
Slaker Vent DP368	**EU38a**	None	NA
Lime Tank Cyclone DP376			
Towel and Tissue Machine, Fuel Burning Sources	**EU39**	None	NA
#2 PM Dry End - Dryers to Reel DP404, DP405			
#1 PM Dry End - Dryers to Reel DP413, DP415			
#5 PM Dry End Dryer DP605			
#6 PM DP660, DP665, DP670, DP675			
Towel and Tissue Machines, Non-Fuel Burning Vents	**EU40**	None	NA
#2 PM Wet End - Headbox to Press DP402, DP403, DP407, DP412			
#1 PM Wet End - Headbox to Press DP417, DP418, DP419			
#5 PM Wet End - Headbox to Press DP601, DP602, DP604			
#6 PM DP661			

Emissions Unit Description	EU ID	Pollution Control Device	PCD ID
Communications Paper Machine Vents	**EU41**	None	NA
#3 PM Dry End Dryers DP522, DP526			
#4 PM Dry End Dryers DP508, DP509, DP514, DP518			
#4 PM Wet End - Headbox to Press DP539, DP540, DP541, DP542, DP543			
#3 PM Wet End - Headbox to Press DP502, DP532, DP533, DP534, DP535, DP536, DP537		#3 PM Wire Exhaust Mist Cyclones	CD536 CD535
Pulp Dryer	**EU42**	None	NA
Press Cyclone 1A DP381			
Press Cyclone 2A DP382			
Press Cyclone 1B DP383			
Press Cyclone 2B DP384			
Wet Pulp Cyclone A DP385			
Wet Pulp Cyclone B DP386			
1st Stage Cyclone DP387			
1st Stage Cyclone B DP388			
2nd Stage Cyclone A DP389			
2nd Stage Cyclone B DP390			
Fugitive Particulate Emissions, Roads and Parking Lots	**EU43**	None	NA
Chip and Bark Storage Piles	**EU44**	None	NA
Wood Chip Pile			
Woodmill Bark Pile			
FBB Sludge Pile			
FBB Bark Pile			

Emissions Unit Description	EU ID	Pollution Control Device	PCD ID
Fugitive Chip Unloading	**EU47**	None	NA
Chip Pile Blowers			
Main Chip Dump			
Portable Truck Dump			
PECO Crane			
Chip Screen Room	**EU50**	None	NA
Screen Room Cyclone, Sawdust #1 DP104			
Screen Room Cyclone, Sawdust #2 DP105			
Screen Room Cyclone, Groundwood DP106			
Screen Room Cyclone, Kraft Air Separator DP107			
Screen Room Cyclone, Kraft Dust Control DP109			
Chip Storage Silo Material Handling	**EU51**	None	NA
M & D Storage Silo DP124			
#1 Groundwood Storage Silo DP125			
#2 Groundwood Storage Silo DP126			
#3 Groundwood Storage Silo DP127			
Kraft Fir Silo DP128			
Kraft Alder Silo DP129			
Kamyr Cyclone DP108			
Kraft/Groundwood Silo Material Handling	**EU52**	None	NA
Kraft Mill Cyclone DP302			
Groundwood Chip Cyclone #1 DP220			
Groundwood Chip Cyclone #2 DP221			
Groundwood Chip Cyclone #3 DP222			
Wastewater Treatment System	**EU53**	None	NA
Process Chemicals VOC Emissions	**EU54**	None	NA

Emissions Unit Description	EU ID	Pollution Control Device	PCD ID
AGGREGATE INSIGNIFICANT EMISSIONS UNITS			
Weak Liquor Tanks #1, #2, Brownstock Filtrate Tanks	**EU03**	None	NA
Weak Liquor Tank #1 DP310			
Weak Liquor Tank #2 DP311			
Weak Liquor Tank #3 DP322			
Kamyr 1st Stage Filtrate Tank DP391			
Kamyr 2nd Stage Filtrate Tank DP392			
Kamyr Rewash Filtrate Tank DP393			
M&D 1st Stage Filtrate Tank DP394			
M&D 2nd Stage Filtrate Tank DP398			
M&D Rewash Filtrate Tank DP399			
Recaust Plant Tanks	**EU20**	None	NA
Green Liquor Clarifier DP362			
Green Liquor Storage DP363			
Spare Dump Tank DP364			
Lime Slaker Vent DP368			
#1 Causticizer DP365			
#2 Causticizer DP366			
#3 Causticizer DP367			
#1 White Liquor Clarifier DP369			
#2 White Liquor Clarifier DP370			
#1 Dregs Washer DP371			
#2 Dregs Washer DP380			
Dregs Filter Vacuum Vent DP350			
Lime Mud Washer DP373			
Lime Mud Storage DP374			
Lime Mud Filter DP351			

Emissions Unit Description	EU ID	Pollution Control Device	PCD ID
Strong Liquor Storage Tank #1 DP816	**EU28b**	None	NA
Strong Liquor Storage Tank #2 DP817			
Strong Liquor Storage Tank #3 DP818			
Strong Liquor Storage Tank #4 DP820			
Limestone Silo DP834	**EU37b**	Limestone Silo Baghouse	CD834
Ash Silo Bin DP837		Ash Silo Vent Baghouse	CD837
Sand Silo DP838		Sand Silo Baghouse	CD838
Converting, Old Tissue #1 DP701		Old Tissue Baghouse	CD701
Converting, Old Tissue #2 DP702		Old Tissue Baghouse	CD702
Converting, Old Tissue #3 DP703		Old Tissue Baghouse	CD703
Converting, New Tissue DP705		New Tissue Baghouse	CD705
Clay Transfer DP544		Clay Unloading Baghouse	CD544
Clay Unloading DP545		Clay Reclaim Baghouse	CD545
Starch Unload System DP546		Starch Unloading Baghouse	CD546
Methanol Storage Tank DP355	**EU15**	None	NA
Electrical generating gas turbines	**EU60**	None	NA
Electrical generating diesel engines	**EU70**	None	NA

END OF SECTION

GENERAL CONDITIONS

G1. General Provision

Terms not otherwise defined in the permit shall have the meaning assigned to such terms in the referenced regulation.

G2. Reference materials

Where referenced in this permit, the version of the following materials are effective as of the dates noted unless otherwise specified in the permit:

a. Source Sampling Manual; January 23, 1992 - State Implementation Plan Volume 3, Appendix A4;
b. Continuous Monitoring Manual; January 23, 1992 - State Implementation Plan Volume 3, Appendix A6; and
c. All state and federal regulations as in effect on the date of issuance of this permit.

G3. Compliance [OAR 340-218-0040(3)(n)(C), 340-218-0050(6), and 340-218-0080(4)]

a. The permittee shall comply with all conditions of the federal operating permit. Any permit condition noncompliance constitutes a violation of the Federal Clean Air Act and/or state rules and is grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application. Any noncompliance with a permit condition specifically designated as enforceable only by the state constitutes a violation of state rules only and is grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application.
b. Any schedule of compliance for applicable requirements with which the source is not in compliance at the time of permit issuance shall be supplemental to, and shall not sanction noncompliance with the applicable requirements on which it is based.
c. For applicable requirements that will become effective during the permit term, the source shall meet such requirements on a timely basis unless a more detailed schedule is expressly required by the applicable requirement.

G4. Credible Evidence:

Notwithstanding any other provisions contained in any applicable requirement, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any such applicable requirements. [OAR 340-214-0120]

G5. Certification [OAR 340-214-0110, 340-218-0040(5), 340-218-0050(3)(d), and 340-218-0080(2)]

Any document submitted to the Department or EPA pursuant to this permit shall contain certification by a responsible official of truth, accuracy and completeness. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and, complete. The permittee shall promptly, upon discovery, report to the Department a material error or omission in these records, reports, plans, or other documents.

G6. Open Burning [OAR Chapter 340, Division 264]

The permittee is prohibited from conducting open burning, except as may be allowed by OAR 340-264-0020 through 340-264-0200.

G7. Asbestos [40 CFR Part 61, Subpart M (federally enforceable), OAR Chapter 340-248-0010 through 340-248-0180 (state-only enforceable) and 340-248-0210 through 340-248-0280]

The permittee shall comply with OAR Chapter 340, Division 248, and 40 CFR Part 61, Subpart M when conducting any renovation or demolition activities at the facility.

G8. Stratospheric Ozone and Climate Protection [40 CFR 82 Subpart F, OAR 340-260-0040]

The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, Recycling and Emissions Reduction.

G9. Permit Shield [OAR 340-218-0110]

a. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that:

i. such applicable requirements are included and are specifically identified in the permit, or
ii. the Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

b. Nothing in this rule or in any federal operating permit shall alter or affect the following:

i. the provisions of ORS 468.115 (enforcement in cases of emergency) and ORS 468.035 (function of department);
ii. the liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
iii. the applicable requirements of the national acid rain program, consistent with section 408(a) of the FCAA; or
iv. the ability of the Department to obtain information from a source pursuant to ORS 468.095 (investigatory authority, entry on premises, status of records).

c. Sources are not shielded from applicable requirements that are enacted during the permit term, unless such applicable requirements are incorporated into the permit by administrative amendment, as provided in OAR 340-218-0150(1)(h), significant permit modification, or reopening for cause by the Department.

G10. Inspection and Entry [OAR 340-218-0080(3)]

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Department of Environmental Quality, or an authorized representative (including an authorized contractor acting as a representative of the EPA Administrator), to perform the following:

a. enter upon the permittee's premises where an Oregon Title V operating permit program source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
b. have access to and copy, at reasonable times, any records that must be kept under

conditions of the permit;

c. inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

d. as authorized by the FCAA or state rules, sample or monitor, at reasonable times, substances or parameters, for the purposes of assuring compliance with the permit or applicable requirements.

G11. Fee Payment [OAR 340-220-0010, and 340-220-0030 through 340-220-0190]

The permittee shall pay an annual base fee and an annual emission fee for all regulated air pollutants except for carbon monoxide, any class I or class II substance subject to a standard promulgated under or established by Title VI of the Federal Clean Air Act, or any pollutant that is a regulated air pollutant solely because it is subject to a standard or regulation under section 112(r) of the Federal Clean Air Act. The permittee shall submit payment to the Department of Environmental Quality, Business Office, 811 SW 6th Avenue, Portland, OR 97204, within 30 days of the date the Department mails the fee invoice or August 1 of the year following the calendar year for which emission fees are paid, whichever is later. Disputes shall be submitted in writing to the Department of Environmental Quality. Payment shall be made regardless of the dispute. User-based fees shall be charged for specific activities (e.g., computer modeling review, ambient monitoring review, etc.) requested by the permittee.

G12. Off-Permit Changes to the Source [OAR 340-218-0140(2)]

a. The permittee shall monitor for, and record, any off-permit change to the source that:

i. is not addressed or prohibited by the permit;
ii. is not a Title I modification;
iii. is not subject to any requirements under Title IV of the FCAA;
iv. meets all applicable requirements;
v. does not violate any existing permit term or condition; and
vi. may result in emissions of regulated air pollutants subject to an applicable requirement but not otherwise regulated under this permit or may result in insignificant changes as defined in OAR 340-200-0020.

b. A contemporaneous notification, if required under OAR 340-218-0140(2)(b), shall be submitted to the Department and the EPA.

c. The permittee shall keep a record describing off-permit changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those off-permit changes.

d. The permit shield of condition G9 shall not extend to off-permit changes.

G13. Section 502(b)(10) Changes to the Source [OAR 340-218-0140(3)]

a. The permittee shall monitor for, and record, any section 502(b)(10) change to the source, which is defined as a change that would contravene an express permit term but would not:

i. violate an applicable requirement;
ii. contravene a federally enforceable permit term or condition that is a monitoring, recordkeeping, reporting, or compliance certification requirement; or
iii. be a Title I modification.

b. A minimum 7-day advance notification shall be submitted to the Department and the

EPA in accordance with OAR 340-218-0140(3)(b).

c. The permit shield of condition G9 shall not extend to section 502(b)(10) changes.

G14. Administrative Amendment [OAR 340-218-0150]

Administrative amendments to this permit shall be requested and granted in accordance with OAR 340-218-0150. The permittee shall promptly submit an application for the following types of administrative amendments upon becoming aware of the need for one, but no later than 60 days of such event:

a. legal change of the registered name of the company with the Corporations Division of the State of Oregon, or

b. sale or exchange of the activity or facility.

G15. Minor Permit Modification [OAR 340-218-0170]

The permittee shall submit an application for a minor permit modification in accordance with OAR 340-218-0170.

G16. Significant Permit Modification [OAR 340-218-0180]

The permittee shall submit an application for a significant permit modification in accordance with OAR 340-218-0180

G17. Staying Permit Conditions [OAR 340-218-0050(6)(e)]

Notwithstanding condition G14 and G15, the filing of a request by the permittee for a permit modification, revocation and re-issuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

G18. Construction/Operation Modification [OAR 340-218-0190]

No permittee shall construct or make modifications required to be reviewed under OAR 340-218-0190, the construction/operation modification rules, without receiving a Notice of Approval in accordance with OAR 340-218-0190. The permittee should allow 60 days for Department review of applications for a construction/operation modification if public notice is not required, or 180 days if public notice is required.

G19. New Source Review Modification [OAR 340-224-0010]

No permittee shall construct or make modifications required to be reviewed under New Source Review (OAR 340-224-0010(1)) without receiving an Air Contaminant Discharge Permit (ACDP) (OAR 340-216-0010). The permittee should allow 180 days for Department review of an ACDP application for New Source Review.

G20. Need to Halt or Reduce Activity Not a Defense [OAR 340-218-0050(6)(b)]

The need to halt or reduce activity shall not be a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

G21. Duty to Provide Information [OAR 340-218-0050(6)(e) and OAR 340-214-0110]

The permittee shall furnish to the Department, within a reasonable time, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Department copies of records required to be retained by the permit or, for

information claimed to be confidential, the permittee may furnish such records to the Department along with a claim of confidentiality.

G22. Reopening for Cause [OAR 340-218-0050(6)(c) and 340-218-0200]

a. The permit may be modified, revoked, reopened and reissued, or terminated for cause as determined by the Department.
b. A permit shall be reopened and revised under any of the circumstances listed in OAR 340-218-0200(1)(a).
c. Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists.

G23. Severability Clause [OAR 340-218-0050(5)]

Upon any administrative or judicial challenge, all the emission limits, specific and general conditions, monitoring, recordkeeping, and reporting requirements of this permit, except those being challenged, remain valid and must be complied with.

G24. Permit Renewal and Expiration [OAR 340-218-0040(1)(a)(D) and 340-218-0130]

a. This permit shall expire at the end of its term. Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted as described below.
b. Applications for renewal shall be submitted at least 12 months before the expiration of this permit, unless the Department requests an earlier submittal. If more than 12 months is required to process a permit renewal application, the Department shall provide no less than six (6) months for the owner or operator to prepare an application. Provided the permittee submits a timely and complete renewal application, this permit shall remain in effect until final action has been taken on the renewal application to issue or deny the permit.

G25. Permit Transference [OAR 340-218-0150(1)(d)]

The permit is not transferable to any person except as provided in OAR 340-218-0150(1)(d).

G26. Property Rights [OAR 340-200-0020 and 340-218-0050(6)(d)]

The permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations, except as provided in OAR 340-218-0110.

G27. Permit Availability [OAR 340-200-0020 and 340-218-0120(2)]

The permittee shall have available at the facility at all times a copy of the Oregon Title V Operating Permit and shall provide a copy of the permit to the Department or an authorized representative upon request.

ALL INQUIRIES SHOULD BE DIRECTED TO:

Northwest Region
2020 S.W. 4th Avenue, #400
Portland, OR 97201-5884
Telephone: (503) 229-5263

Attachment 1 - Cross-reference from New Rule Numbers to Old Rule Numbers (Effective October 14, 1999)

New Rule Number	Old Rule Number
200-0020	020-0205
200-0020	028-0110
200-0030	020-0003
200-0040	020-0047
200-0050	028-0700
200-0100	020-0200
200-0110	020-0210
200-0120	020-0215
202-0010	031-0005
202-0050	031-0010
202-0060	031-0015
202-0070	031-0020
202-0080	031-0025
202-0090	031-0030
202-0100	031-0040
202-0110	031-0045
202-0120	031-0050
202-0130	031-0055
202-0200	031-0100
202-0210	031-0110
202-0220	031-0115
204-0010	031-0500
204-0020	031-0510
204-0030	031-0520
204-0040	031-0530
204-0050	031-0120
204-0060	031-0130
204-0070	021-0010
204-0080	024-0301
204-0090	022-0470
206-0010	027-0005
206-0030	027-0010
206-0040	027-0012
206-0050	027-0015
206-0060	027-0025
206-0070	027-0035
208-0010	021-0005
208-0010	021-0050
208-0010	030-0010
208-0100	021-0012
208-0110	021-0015
208-0200	021-0055
208-0210	021-0060
208-0500	030-0400
208-0510	030-0410
208-0520	030-0420
208-0530	030-0430
208-0540	030-0440
208-0550	030-0450
208-0560	030-0460
208-0570	030-0470
208-0580	030-0480
208-0590	030-0490
208-0600	030-0500
208-0610	030-0510
208-0620	030-0520
208-0630	030-0530
208-0640	030-0540
208-0650	030-0600
208-0660	030-0610
208-0670	030-0620
210-0010	028-0200
210-0100	028-0500
210-0110	028-0510
210-0120	028-0520
210-0200	028-0800
210-0210	028-0810
210-0220	028-0820
212-0110	028-0900
212-0120	028-1100
212-0130	028-1110
212-0140	028-1120
212-0150	028-1130
212-0160	028-1140
212-0200	028-1200
212-0210	028-1210
212-0220	028-1220
212-0230	028-1230
212-0240	028-1240
212-0250	028-1250
212-0260	028-1260
212-0270	028-1270
212-0280	028-1280
214-0100	028-0200
214-0110	028-0300
214-0120	028-0310
214-0130	028-0400
214-0200	028-1500
214-0210	028-1510
214-0220	028-1520
214-0300	028-1400
214-0310	028-1410
214-0320	028-1420
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214-0340	028-1440
214-0350	028-1450
214-0360	028-1460
216-0010	028-1700
216-0020	028-1720
216-0040	028-1770
216-0050	028-1710
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218-0040	028-2120
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218-0060	028-2140
218-0070	028-2150
218-0080	028-2160
218-0090	028-2170
218-0100	028-2180
218-0110	028-2190
218-0120	028-2200
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218-0150	028-2230
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218-0170	028-2250
218-0180	028-2260
218-0190	028-2270
218-0200	028-2280
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218-0220	028-2300
218-0230	028-2310
218-0240	028-2320
218-0250	028-1790
220-0010	028-2560
220-0030	028-2580
220-0040	028-2590
220-0050	028-2600
220-0060	028-2610
220-0070	028-2620
220-0080	028-2630
220-0090	028-2640
220-0100	028-2650
220-0110	028-2660
220-0120	028-2670
220-0130	028-2680
220-0140	028-2690
220-0150	028-2700
220-0160	028-2710
220-0170	028-2720
220-0180	028-2730
220-0190	028-2740
222-0010	028-1000
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222-0050	028-1040
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222-0070	028-1060
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226-0140	028-0640
226-0200	021-0012
226-0210	021-0030
226-0300	021-0035
226-0310	021-0040
226-0320	021-0045
226-0400	028-1030
228-0010	021-0012
228-0020	021-0005
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228-0100	022-0010
228-0110	022-0015
228-0120	022-0020
228-0130	022-0025

New Rule Number	Old Rule Number
228-0200	022-0055
228-0210	021-0020
228-0300	022-0075
230-0010	025-0850
230-0020	025-0852
230-0030	025-0750
230-0030	025-0855
230-0030	025-0950
230-0100	025-0860
230-0110	025-0865
230-0120	025-0870
230-0130	025-0875
230-0140	025-0880
230-0150	025-0885
230-0200	025-0890
230-0210	025-0895
230-0220	025-0900
230-0230	025-0905
230-0300	025-0950
230-0310	025-0960
230-0320	025-0970
230-0330	025-0980
230-0340	025-0990
230-0350	025-1000
230-0360	025-1010
230-0400	025-0750
230-0410	025-0750
232-0010	022-0100
232-0020	022-0104
232-0030	022-0102
232-0040	022-0104
232-0050	022-0106
232-0060	022-0107
232-0070	022-0110
232-0080	022-0120
232-0085	022-0125
232-0090	022-0130
232-0100	022-0137
232-0120	022-0140
232-0130	022-0150
232-0140	022-0153
232-0150	022-0160
232-0160	022-0170
232-0170	022-0175
232-0180	022-0180

New Rule Number	Old Rule Number
232-0190	022-0183
232-0200	022-0186
232-0210	022-0190
232-0220	022-0200
232-0230	022-0210
232-0240	022-0220
234-0010	025-0005
234-0010	025-0150
234-0010	025-0220
234-0010	025-0305
234-0010	025-0350
234-0010	025-0410
234-0100	025-0010
234-0110	025-0015
234-0120	025-0020
234-0130	025-0025
234-0140	025-0027
234-0200	025-0155
234-0210	025-0165
234-0220	025-0170
234-0230	025-0175
234-0240	025-0180
234-0250	025-0185
234-0260	025-0190
234-0270	025-0205
234-0310	025-0224
234-0320	025-0226
234-0330	025-0228
234-0340	025-0230
234-0350	025-0232
234-0360	025-0234
234-0400	025-0355
234-0410	025-0360
234-0420	025-0370
234-0430	025-0380
234-0500	025-0310
234-0510	025-0315
234-0520	025-0320
234-0530	025-0325
236-0010	025-0105
236-0010	025-0260
236-0100	025-0255
236-0120	025-0265
236-0130	025-0270
236-0140	025-0280

New Rule Number	Old Rule Number
236-0150	025-0285
236-0200	025-0405
236-0220	025-0415
236-0230	025-0430
236-0300	025-0070
236-0310	025-0055
236-0320	025-0060
236-0330	025-0065
236-0410	025-0110
236-0420	025-0115
236-0430	025-0120
236-0440	025-0125
236-0500	025-0745
238-0010	025-0505
238-0020	025-0515
238-0040	025-0510
238-0050	025-0530
238-0060	025-0535
238-0070	025-0800
238-0080	025-0805
238-0090	025-0520
238-0100	025-0740
240-0010	030-0005
240-0020	030-0007
240-0030	030-0010
240-0100	030-0012
240-0110	030-0015
240-0120	030-0021
240-0130	030-0025
240-0140	030-0030
240-0150	030-0031
240-0160	030-0035
240-0170	030-0040
240-0180	030-0043
240-0190	030-0044
240-0200	030-0046
240-0210	030-0050
240-0220	030-0055
240-0230	030-0065
240-0240	030-0067
240-0250	030-0070
240-0260	030-0111
240-0270	030-0115
240-0300	030-0200
240-0310	030-0205

New Rule Number	Old Rule Number
240-0320	030-0210
240-0330	030-0215
240-0340	030-0220
240-0350	030-0225
240-0360	030-0230
240-0400	030-0300
240-0410	030-0310
240-0420	030-0320
240-0430	030-0330
240-0440	030-0340
242-0010	030-0800
242-0020	030-0810
242-0030	030-0820
242-0040	030-0830
242-0050	030-0840
242-0060	030-0850
242-0070	030-0860
242-0080	030-0870
242-0090	030-0880
242-0100	030-0890
242-0110	030-0900
242-0120	030-0910
242-0130	030-0920
242-0140	030-0930
242-0150	030-0940
242-0160	030-0950
242-0170	030-0960
242-0180	030-0970
242-0190	030-0980
242-0200	030-0990
242-0210	030-1000
242-0220	030-1010
242-0230	030-1020
242-0240	030-1030
242-0250	030-1040
242-0260	030-1050
242-0270	030-1060
242-0280	030-1070
242-0290	030-1080
242-0300	030-1100
242-0310	030-1110
242-0320	030-1160
242-0330	030-1120
242-0340	030-1130
242-0350	030-1140

New Rule Number	Old Rule Number
242-0360	030-1150
242-0370	030-1170
242-0380	030-1180
242-0390	030-1190
242-0400	030-0700
242-0410	030-0710
242-0420	030-0720
242-0430	030-0730
242-0440	030-0740
242-0500	022-0400
242-0510	022-0401
242-0520	022-0402
242-0600	022-0700
242-0610	022-0710
242-0620	022-0740
242-0630	022-0760
242-0700	022-0900
242-0710	022-0910
242-0720	022-0920
242-0730	022-0930
242-0740	022-0940
242-0750	022-0950
242-0760	022-1100
242-0770	022-1110
242-0780	022-1120
242-0790	022-1130
244-0010	032-0100
244-0020	032-0110
244-0030	032-0120
244-0040	032-0130
244-0050	032-0140
244-0100	032-0300
244-0110	032-0310
244-0120	032-0320
244-0130	032-0330
244-0140	032-0340
244-0150	032-0350
244-0160	032-0360
244-0170	032-0370
244-0180	032-0380
244-0200	032-0500
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244-0220	032-0510
244-0220	032-5520
244-0230	032-5400

New Rule Number	Old Rule Number
248-0010	032-5590
248-0010	033-0020
248-0100	033-0010
248-0110	033-0030
248-0120	033-0040
248-0130	033-0050
248-0140	033-0060
248-0150	033-0070
248-0160	033-0080
248-0170	033-0090
248-0180	033-0100
248-0210	032-5600
248-0220	032-5604
248-0230	032-5605
248-0240	032-5610
248-0250	032-5620
248-0260	032-5630
248-0270	032-5640
248-0280	032-5650
250-0010	020-1500
250-0020	020-1520
250-0030	020-1510
250-0040	020-1530
250-0050	020-1540
250-0060	020-1550
250-0070	020-1560
250-0080	020-1570
250-0090	020-1580
250-0100	020-1590
250-0110	020-1600
252-0010	020-0710
252-0020	020-0730
252-0030	020-0720
252-0040	020-0740
252-0050	020-0750
252-0060	020-0760
252-0070	020-0770
252-0080	020-0780
252-0090	020-0790
252-0100	020-0800
252-0110	020-0810
252-0120	020-0820
252-0130	020-0830
252-0140	020-0840
252-0150	020-0850

New Rule Number	Old Rule Number
252-0160	020-0860
252-0170	020-0870
252-0180	020-0880
252-0190	020-0890
252-0200	020-0900
252-0210	020-0910
252-0220	020-1000
252-0230	020-1010
252-0240	020-1020
252-0250	020-1030
252-0260	020-1040
252-0270	020-1050
252-0280	020-1060
252-0290	020-1070
254-0010	020-0100
254-0020	020-0105
254-0030	020-0110
254-0040	020-0115
254-0050	020-0120
254-0060	020-0125
254-0070	020-0130
254-0080	020-0135
256-0010	024-0005
256-0010	024-0305
256-0100	024-0010
256-0110	024-0015
256-0120	024-0020
256-0130	024-0025
256-0140	024-0030
256-0150	024-0035
256-0160	024-0040
256-0200	024-0100
256-0210	024-0200
256-0300	024-0300
256-0310	024-0306
256-0320	024-0307
256-0330	024-0308
256-0340	024-0309
256-0350	024-0312
256-0360	024-0314
256-0370	024-0318
256-0380	024-0320
256-0390	024-0325
256-0400	024-0330
256-0410	024-0332

New Rule Number	Old Rule Number
256-0420	024-0335
256-0430	024-0337
256-0440	024-0340
256-0450	024-0355
256-0460	024-0357
256-0470	024-0360
258-0010	022-0450
258-0100	022-0440
258-0110	022-0460
258-0120	022-0490
258-0130	022-0500
258-0140	022-0503
258-0150	022-0507
258-0160	022-0510
258-0170	022-0520
258-0180	022-0530
258-0190	022-0540
258-0200	020-0136
258-0210	022-0550
258-0220	022-0560
258-0230	022-0570
258-0240	022-0580
258-0250	022-0590
258-0260	022-0600
258-0270	022-0610
258-0280	022-0620
258-0290	022-0630
258-0300	022-0640
258-0310	022-0650
258-0400	022-0300
260-0010	022-0405
260-0020	022-0410
260-0030	022-0415
260-0040	022-0420
262-0010	034-0001
262-0020	034-0005
262-0030	034-0010
262-0040	034-0015
262-0050	034-0020
262-0100	034-0045
262-0110	034-0050
262-0120	034-0060
262-0130	034-0070
262-0200	034-0150
262-0210	034-0155

New Rule Number	Old Rule Number
262-0220	034-0160
262-0230	034-0165
262-0240	034-0170
262-0250	034-0175
262-0300	034-0200
262-0310	034-0205
262-0320	034-0210
262-0330	034-0215
264-0010	023-0022
264-0020	023-0025
264-0030	023-0030

New Rule Number	Old Rule Number
264-0040	023-0035
264-0050	023-0040
264-0060	023-0042
264-0070	023-0043
264-0080	023-0045
264-0100	023-0055
264-0110	023-0060
264-0120	023-0065
264-0130	023-0070
264-0140	023-0075
264-0150	023-0080

New Rule Number	Old Rule Number
264-0160	023-0085
264-0170	023-0090
264-0180	023-0100
264-0190	023-0105
264-0200	023-0115
266-0010	026-0001
266-0020	026-0003
266-0030	026-0005
266-0040	026-0010
266-0050	026-0012
266-0060	026-0013

New Rule Number	Old Rule Number
266-0070	026-0015
266-0080	026-0031
266-0090	026-0033
266-0100	026-0035
266-0110	026-0040
266-0120	026-0045
266-0130	026-0055
268-0030	028-1980
268-0040	028-1960

PERMITS\040004P.DOC

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
OREGON TITLE V OPERATING PERMIT

PART 2 OF 2

Northwest Region
2020 S.W. 4th Avenue, #400
Portland, OR 97201-4987
Telephone: (503) 229-5263

Issued in accordance with the provisions of
ORS 468A.040, 468A.300 and based on the land use compatibility findings included in the permit record.

ISSUED TO:

Fort James Operating Company
92326 Taylorville Road
Clatskanie, OR 97016

INFORMATION RELIED UPON:

Application Number: 017185
Received: 10/01/98

Formerly issued to: Fort James Operating Company

PLANT SITE LOCATION:

92326 Taylorville Road
Clatskanie, Oregon

LAND USE COMPATIBILITY STATEMENT:

From: Clatsop County Planning Department
Dated: 10/08/93

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Ed Druback, Northwest Region Air Quality Manager — Date

Nature of Business:	See Part 1 of permit
Primary SIC:	See Part 1 of permit
Other SICs:	See Part 1 of permit

RESPONSIBLE OFFICIAL:

See Part 1 of permit

FACILITY CONTACT PERSON

See Part 1 of permit

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Summary of requirements

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Averaging Time	Testing Condition	Monitoring Condition
40 CFR 63.441 40 CFR 63.961	1	Definitions	n/a	n/a	n/a	n/a
40 CFR 63.453(o)	2	Operating out of parameter range is violation of std.	n/a	n/a	n/a	n/a
OAR 340-218-0200	3	Permit reopener for HVLC system	n/a	n/a	n/a	n/a
40 CFR 63.455(b)	4	Progress reports	n/a	n/a	n/a	n/a
40 CFR 63.6(i)(4)(i)(A)	5	Compliance extension	n/a	n/a	n/a	n/a
40 CFR 63.8(d)	6	CMS Quality Control Program	n/a	n/a	n/a	n/a
40 CFR 63.10(e)(3)	8	Semiannual reporting	n/a	n/a	n/a	n/a
40 CFR 63.10(d)	7	Immediate reporting	n/a	n/a	n/a	n/a
40 CFR 63.6(e)(3)	9	SSM Plan	n/a	n/a	n/a	n/a

DEFINITIONS – PULP AND PAPER NESHAP

1. Definitions.

1.a. The terms used in the section(s) of this permit that are specifically intended to implement Subpart S --National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry, 40 CFR 63.440 through 63.459, shall have the meaning given them in 40 CFR 63.441, Definitions. [40 CFR 63.441]

1.b. The terms used in the section(s) of this permit that are specifically intended to implement Individual Drain System (Subpart RR) requirements, as specified in Subpart S --National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry, shall have the meaning given them in 40 CFR 63.961, Definitions. [40 CFR 63.961]

1.c. The terms used in the section(s) of this permit that are specifically intended to implement the NESHAP General Provisions, 40 CFR 63 Subpart A, shall have the meaning given them in 40 CFR 63.2, Definitions. [40 CFR 63.2]

1.d. "Named streams" means the pulping process condensates from the equipment systems listed below [40 CFR 63.446(b)] . Named streams specific to the facility addressed by this permit are specified in Condition 32.

- 1.d.i. Each digester system;
- 1.d.ii. Each turpentine recovery system;
- 1.d.iii. Each evaporator system condensate from:
  - 1.d.iii.(1) The vapors from each stage where weak liquor is introduced (feed stages); and
  - 1.d.iii.(2) Each evaporator vacuum system for each stage where weak liquor is introduced (feed stages).
- 1.d.iv. Each HVLC collection system; and
- 1.d.v. Each LVHC collection system.

1.e. "Other streams" means HAP-containing condensate streams that are not named streams.

VIOLATION OF THE STANDARD

2. The permittee shall operate the control devices used to comply with the sections of this permit that pertain to the Pulp and Paper NESHAP (40 CFR Part 63, Subpart S), in a manner consistent with the minimum or maximum (as appropriate) operating parameter value or procedure required to be monitored. Except as provided in Conditions 11.d, 13.e and 40, operation of the control device below minimum operating parameter values or above maximum operating parameter values established in this permit or failure to perform procedures required by this permit shall constitute a violation of the applicable emission standard and be reported as a period of excess emissions. [40 CFR 63.453(o)]

PERMIT REOPENINGS

3. The Department may reopen this permit to insert new conditions or modify existing conditions when such reopening is necessary to: [OAR 340-218-0200]

3.a. revise conditions in this permit that are affected by any revisions to 40 CFR 63 Subparts A and/or S; or

3.b. revise conditions in this permit that pertain to the HVLC system as defined in Condition 13.b and 40 CFR 63.443(a)(1)(ii) through 63.443(a)(1)(v) (i.e., requirements for which the initial compliance date is April 17, 2006), provided that such reopening is initiated prior to April 17, 2006; or

3.c. revise conditions in this permit that pertain to any compliance extensions granted, provided that such reopening is initiated prior to the end of the compliance extension period.

PROGRESS REPORTS AND PLAN UPDATES

4. Applicable Requirement The permittee shall submit Progress Reports and Plan Updates as specified in this Condition. [40 CFR 63.455(b)]

4.a. Schedule of submittals:
4.a.i. By December 31, 2001, submit a Progress Report as required by Condition 5.
4.a.ii. By April 15, 2003, submit a Plan Update and Progress Report.
4.a.iii. By April 15, 2005, submit a Plan Update and Progress Report.

4.b. Plan Updates are non-binding descriptions of the permittee's chosen method(s) to achieve compliance with all Conditions for which compliance has not yet been achieved. Plan updates shall include the information specified in 40 CFR 63.455(b).

4.c. Progress Reports shall describe progress made to date toward achieving compliance with all Conditions for which compliance has not yet been achieved.

COMPLIANCE EXTENSION AND INTERIM REQUIREMENTS

5. The permittee is granted a compliance extension to comply with the requirements identified below, subject to the conditions specified below: [40 CFR 63.6(i)(4)(i)(A) and 63.6(i)(10)]

5.a. The sources to which the compliance extension are granted are the kraft pulping process condensates identified in 40 CFR 63.446(b). The compliance extension applies to both collection and treatment of the kraft pulping process condensates, as well as all associated monitoring, recordkeeping, reporting, Startup, Shutdown and Malfunction (SSM) plan, and CMS quality control program requirements.

5.b. The compliance date for the requirements identified above is April 16, 2002.

5.c. Progress toward achieving compliance with the kraft pulping condensate requirements shall be reported as required by Condition 4 .

CMS QUALITY CONTROL PROGRAM

6. Applicable Requirement A CMS quality control program as required by 40 CFR 63.8(d)(2) shall be developed by October 12, 2001. [40 CFR 63.8(d)(2) and 63.8(d)(3)]

6.a. The CMS quality control procedures shall be kept on record as required by 40 CFR 63.8(d)(3).
6.b. A performance evaluation test plan is not required, per 40 CFR 63.8(e).

REPORTING REQUIREMENTS FOR SUBPARTS A AND S

Immediate Reporting

7. The permittee shall provide immediate reporting, as specified in this Condition, for the following:

7.a. Any time an action is taken during a startup, shutdown or malfunction that is not consistent with the procedures specified in the SSM plan, the permittee shall report the actions taken. [40 CFR 63.10(d)(5)(ii)]

7.a.i. The report shall be submitted by phone or fax within 2 working days after commencing actions inconsistent with the plan. For the purpose of this Condition, working days are Monday through Friday, excluding holidays observed by the Department.

7.a.ii. If requested by the Department, the permittee shall report the actions taken in a letter within 7 working days after receiving the Department's request.

7.b. For those malfunctions or other events that affect the CMS and are not addressed by the SSM plan, the permittee shall report the actions taken if those actions are not consistent with the SSM plan. [40 CFR 63.8(c)(1)(ii)]

7.b.i. The permittee shall make an initial report by phone or fax within 24 hours of commencing actions that are not consistent with the SSM plan.

7.b.ii. The permittee shall submit a follow-up written report within 2 weeks of commencing actions that are not consistent with the SSM plan.

Semiannual Reporting

8. The permittee shall submit semiannual Summary Reports and (if required) Excess Emissions and Continuous Monitoring System Performance Reports to the Department in accordance with the following: [40 CFR 63.10(e)(3)]

8.a. The semiannual reports shall be submitted by the same dates as the annual and semiannual reports required in the permittee's Title V permit. [40 CFR 63.10(a)(5)]

8.b. If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the Summary Report shall be submitted, and the full Excess Emissions and Continuous Monitoring System Performance Report need not be submitted unless required by the Administrator. [40 CFR 63.10(e)(3)(vii)]

8.c. If the total duration of excess emissions of process or control system parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, or CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, both the Summary Report and the Excess Emissions and Continuous Monitoring System Performance Report shall be submitted. [40 CFR 63.10(e)(3)(viii)]

8.d. The Summary Report shall be entitled "Summary Report – Gaseous and Opacity Excess Emission and Continuous Monitoring System Performance" and shall contain the information specified below: [40 CFR 63.10(e)(3)(vi)]

8.d.i. The company name and address of the affected source; [40 CFR 63.10(e)(3)(vi)(A)]

8.d.ii. An identification of each hazardous air pollutant monitored at the affected source; [40 CFR 63.10(e)(3)(vi) (B)]

8.d.iii. The beginning and ending dates of the reporting period; [40 CFR 63.10(e)(3)(vi)(C)]

8.d.iv. A brief description of the process units; [40 CFR 63.10(e)(3)(vi) (D)]

8.d.v. The emission and operating parameter limitations specified in the relevant standard(s); [40 CFR 63.10(e)(3)(vi) (E)]

8.d.vi. The monitoring equipment manufacturer(s) and model number(s); [40 CFR 63.10(e)(3)(vi) (F)]

8.d.vii. The total operating time of the affected source during the reporting period; [40 CFR 63.10(e)(3)(vi) (H)]

8.d.viii. A description of any changes in CMS, processes, or controls since the last reporting period; [40 CFR 63.10(e)(3)(vi) (K)]

8.d.ix. The name, title, and signature of the responsible official who is certifying the accuracy of the report; [40 CFR 63.10(e)(3)(vi) (L)] and

8.d.x. The date of the report. [40 CFR 63.10(e)(3)(vi) (M)]

8.e. If required by Condition 8.c. , the Excess Emissions and Continuous Monitoring System Performance Report shall include the following emissions information:

8.e.i. the specific identification (i.e., date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances that occurs during startups, shutdowns and malfunctions of the affected source; [40 CFR 63.10 (c)(7)]

8.e.ii. the specific identification (i.e., date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances that occurs during periods other than startups, shutdowns and malfunctions of the affected source. [40 CFR 63.10 (c)(8)]

8.e.iii. An emission data summary (or similar summary if the owner or operator monitors control system parameters), including: [40 CFR 63.10(e)(3)(vi) (I)]

8.e.iii.(1) the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases),

8.e.iii.(2) the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and

8.e.iii.(3) a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

8.f. If required by Condition 8.c. , the Excess Emissions and Continuous Monitoring System Performance Report shall include the following information on CMS performance:

8.f.i. the date and time identifying each period in which the CMS was inoperative except for zero (low-level) and high-level checks; [40 CFR 63.10(c)(5)]

8.f.ii. the date and time identifying each period in which the CMS was out of control; [40 CFR 63.10 (c)(6)]

8.f.iii. A CMS performance summary (or similar summary if the owner or operator monitors control system parameters), including: [40 CFR 63.10(e)(3)(vi)(J)]

8.f.iii.(1) the total CMS downtime during the reporting period (recorded in hours),

8.f.iii.(2) the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and

8.f.iii.(3) a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes.

STARTUP, SHUTDOWN AND MALFUNCTION (SSM) PLAN

9. Applicable Requirement The permittee shall develop and implement a written Startup, Shutdown and Malfunction Plan (SSM Plan) in accordance with 40 CFR 63.6(e)(3) and the following schedule: [40 CFR 63.6(e)(3)]

9.a. By no later than April 16, 2001, the SSM Plan shall be completed and address the following:

9.a.i. the pulping system control requirements specified in 40 CFR 63.443, except for the equipment systems specified in 40 CFR 63.443(a)(1)(ii) through 63.443(a)(1)(v);

9.a.ii. the bleaching system control requirements specified in 40 CFR 63.445;

9.a.iii. the kraft pulping process condensates as specified in 40 CFR 63.446 in accordance with Condition 5; and

9.a.iv. all routine or otherwise predictable CMS malfunctions for CMS associated with compliance monitoring for the above.

9.b. By no later than April 17, 2006, the SSM Plan shall address the following:

9.b.i. the pulping system control requirements for the equipment systems specified in 40 CFR 63.443(a)(1)(ii) through 63.443(a)(1)(v) ; and

9.b.ii. all routine or otherwise predictable CMS malfunctions for CMS associated with compliance monitoring for the above.

9.c. The SSM plan and all revisions to the SSM plan are hereby incorporated into this permit for so long as 40 CFR 63 Subpart A shall require that the SSM plan be incorporated into the permit by reference.

9.d. In the event that the requirement to incorporate the SSM Plan by reference into the permit is deleted from 40 CFR 63 Subpart A, Condition 9.c shall become null and void.

PULPING SYSTEM REQUIREMENTS (LVHC/HVLC SYSTEMS)

Summary of requirements

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Averaging Time	Testing Condition	Monitoring Condition
40 CFR 63.443(a)	11	LVHC HAPs, 4/16/2001 thru 4/16/2006 *	Capture and control	n/a	n/a	12
40 CFR 63.443(a)	13	LVHC and HVLC HAPs, after 4/16/2006 *	Capture and control	n/a	n/a	14
40 CFR 63.443(d)(2)	19	Thermal oxidizer, 20 ppm opt.	Emit no more than 20 ppmv HAP @ 10% O_2	n/a	20	n/a
40 CFR 63.443(d)(2) and 40 CFR 63.453(n)	21	Thermal oxidizer operating parameters	See Condition 21	3-hour block	n/a	22

* NOTE: Conditions 11 and 12 are effective from April 16, 2001, through April 16, 2006. On April 17, 2006, Conditions 11 and 12 shall be superseded by Conditions 13 and 14.

10. This condition lists the LVHC and HVLC equipment that is subject to the 40 CFR Part 63, Subpart S requirements in this permit. [40 CFR Part 63, Subpart S]

LVHC Equipment
Kamyr Digester System
M&D Digester System
Evaporator System
Concentrator System

LVHC Main Vent(s)
NCG Bypass Line

HVLC Equipment
to be determined

HVLC Main Vent(s)
to be determined

LVHC System only, April 16, 2001 through April 16, 2006

11. Applicable Requirement On and after April 16, 2001, the permittee shall comply with the requirements in this Condition. On April 17, 2006, this Condition becomes void and shall be superseded by Condition 13. [40 CFR 63.440(d)]

11.a. Each LVHC system shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in Condition 11.c. [40 CFR 63.443(a) and (c)]

11.b. The enclosures and closed-vent system shall meet the requirements specified in Condition 42. [40 CFR 63.443(c)]

11.c. The control device(s) used to reduce total HAP emissions from each LVHC system shall:

11.c.i. Reduce the total HAP concentration at the outlet of the thermal oxidizer to 20 parts per million (ppm) or less by volume, corrected to 10 percent oxygen on a dry basis [40 CFR 63.443(d)(2)] ; or

11.c.ii. Reduce total HAP emissions using a thermal oxidizer designed and operated in accordance with 40 CFR 63.443(d)(3). [40 CFR 63.443(d)(3)] ; or

11.c.iii. Reduce total HAP emissions using one of the following: [40 CFR 63.443(d)(4)]

11.c.iii.(1) A boiler, lime kiln or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone; or

11.c.iii.(2) A boiler or recovery furnace with a heat input capacity greater than or equal to 44 megawatts (150 million BTU per hour) by introducing the HAP emission stream with the combustion air.

11.d. Periods of excess emissions shall not be a violation of this Condition provided that the time of excess emissions (excluding periods of Startup, Shutdown, or Malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels: [40 CFR 63.443(e)]

11.d.i. One percent for control devices used to reduce the total HAP emissions from the LVHC system.

11.d.ii. Periods of excess emissions include the periods described below, except as noted:

11.d.ii.(1) All periods during which any equipment included in the LVHC system is operating, and

11.d.ii.(1)(a) A control device is not in use; or

11.d.ii.(1)(b) A control device is in use but is functioning outside the required parameter range; or

11.d.ii.(1)(c) The LVHC main vent valve listed in Condition 10 is open.

11.d.ii.(1)(c)(1) Concurrent periods of time when multiple main vent valves are open will be counted as a single "venting time".

11.d.ii.(1)(c)(2) "Main vent valve" means any valve that, when open, will allow all LVHC gases to bypass the control device(s) and be emitted directly to atmosphere without treatment.

11.d.ii.(2) Typically closed emergency valves, including but not limited to pressure-vacuum-relief (PVR) valves, water seals, rupture discs, sample valves, drain valves, etc., shall not be included in the determination of excess emissions.

12. Monitoring Requirement On and after April 16, 2001, the permittee shall monitor the parameters specified in this Condition whenever any equipment included in the LVHC system is operating. On April 17, 2006, this Condition becomes void and shall be superseded by Condition 14. [OAR 340-218-0050(3)(a)]

12.a. All periods in which the LVHC system is operating shall be recorded.

12.b. All periods in which a Startup, Shutdown or Malfunction of the control device(s) is occurring shall be recorded.

12.c. All periods in which the LVHC system is operating and a control device is not in use shall be recorded.

12.d. All periods in which a control device is in use but is functioning outside the required parameter range shall be recorded.

12.e. All periods of bypassing from the LVHC main vent.

12.e.i. Bypassing shall be monitored at least once every 15 minutes by use of a flow indicating device installed in each bypass line, or by use of any indicating device(s) that provide(s) a positive indication of bypassing. [40 CFR 63.450(d)]

12.e.ii. The duration of the use of bypass valves on computer controlled valves. [40 CFR 63.454(b)(12)]

12.f. Recordkeeping The permittee shall maintain records of the information specified in this Condition. [OAR 340-218-0050(3)(b)]

12.f.i. The total operating time of the LVHC system during each semi-annual period [40 CFR 63.10(c)(13].

12.f.ii. The date, time and duration of all periods in which the LVHC system was operating and a control device was not in use.

12.f.iii. The date, time and duration of all periods in which a control device was in use but was functioning outside the required parameter range.

12.f.iv. The date, time and duration of all periods of bypassing from the LVHC main vent valve(s). [40 CFR 63.454(b)(12)]

Subpart A recordkeeping

12.f.v. the occurrence and duration of each startup, shutdown or malfunction [40 CFR 63.10(b)(2)(i)];

12.f.vi. the occurrence and duration of each malfunction of air pollution control equipment [40 CFR 63.10(b)(2)(ii)];

12.f.vii. all major maintenance performed on the air pollution control equipment [40 CFR 63.10(b)(2)(iii)].

12.f.viii. actions taken during periods of startup, shutdown or malfunction when such actions are different from procedures specified in the SSM plan [40 CFR 63.10(b)(2)(iv)];

12.f.ix. actions taken during periods of startup, shutdown or malfunction when such actions are consistent with procedures specified in the SSM plan [40 CFR 63.10(b)(2)(v)].

12.f.x. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occur during startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(7)];

12.f.xi. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occurs during periods other than startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(8)];

12.f.xii. the nature and cause of any malfunction (if known) [40 CFR 63.10(c)(10)];

12.f.xiii. the corrective action taken or preventive measures adopted [40 CFR 63.10(c)(11))].

LVHC and HVLC Systems, on and after April 17, 2006

13. Applicable Requirement On and after April 17, 2006, the permittee shall comply with the following requirements for the pulping system: [40 CFR 63.440(d)]

13.a. Each LVHC system shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in this Condition. [40 CFR 63.443(a) and (c)]

13.b. Each HVLC system shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in this Condition. The equipment systems that are subject to this Condition are listed below. [40 CFR 63.443(a) and (c)]

13.b.i. Each knotter or screen system with total HAP mass emission rates greater than or equal to the rates specified in paragraphs (1) or (2), below, or the combined rate specified in paragraph (3), below:

13.b.i.(1) Each knotter system with emissions of 0.05 kilograms or more of total HAP per megagram of ODP (0.1 pounds per ton).

13.b.i.(2) Each screen system with emissions of 0.10 kilograms or more of total HAP per megagram of ODP (0.2 pounds per ton).

13.b.i.(3) Each knotter and screen system with emissions of 0.15 kilograms or more of total HAP per megagram of ODP (0.3 pounds per ton).

13.b.ii. Each pulp washing system;

13.b.iii. Each decker system that:

13.b.iii.(1) Uses any process water other than fresh water or paper machine white water; or

13.b.iii.(2) Uses any process water with a total HAP concentration greater than 400 parts per million by weight; and

13.b.iv. Each oxygen delignification system.

13.c. The enclosures and closed-vent system shall meet the requirements specified in Condition 42. [40 CFR 63.443(c)]

13.d. The control device(s) used to reduce total HAP emissions from each equipment system listed in paragraphs (a) and (b) of this Condition shall:

13.d.i. Reduce total HAP emissions by 98 percent or more by weight [40 CFR 63.443(d)(1)] ; or

13.d.ii. Reduce the total HAP concentration at the outlet of the thermal oxidizer to 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis [40 CFR 63.443(d)(2)] ; or

13.d.iii. Reduce total HAP emissions using a thermal oxidizer designed and operated in accordance with 40 CFR 63.443(d)(3). [40 CFR 63.443(d)(3)] ; or

13.d.iv. Reduce total HAP emissions using one of the following: [40 CFR 63.443(d)(4)]

13.d.iv.(1) A boiler, lime kiln or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone; or

13.d.iv.(2) A boiler or recovery furnace with a heat input capacity greater than or equal to 44 megawatts (150 million BTU per hour) by introducing the HAP emission stream with the combustion air.

13.e. Periods of excess emissions shall not be a violation of paragraphs (c) and (d) of this Condition provided that the time of excess emissions (excluding periods of Startup, Shutdown, or Malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels: [40 CFR 63.443(e)]

13.e.i. One percent for control devices used to reduce the total HAP emissions from the LVHC system; and

13.e.ii. Four percent for control devices used to reduce the total HAP emissions from the HVLC system; or

13.e.iii. Four percent for control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems.

13.e.iv. Periods of excess emissions include the periods described below, except as noted:

13.e.iv.(1) All periods during which any equipment included in the LVHC and HVLC systems is operating and

13.e.iv.(1)(a) A control device is not in use; or

13.e.iv.(1)(b) A control device is in use but is functioning outside the required parameter range; or

13.e.iv.(1)(c) One or more LVHC and/or HVLC main vent valves listed in Condition 10 is/are open.

13.e.iv.(1)(c)(1) Concurrent periods of time when multiple main vent valves are open will be counted as a single "venting time".

13.e.iv.(1)(c)(2) "Main vent valve" means any valve that, when open, will allow all LVHC and/or HVLC gases to bypass the control device(s) and be emitted directly to atmosphere without treatment.

13.e.iv.(2) Typically closed emergency valves, including but not limited to pressure-vacuum-relief (PVR) valves, water seals, rupture discs, sample valves, drain valves, etc., shall not be included in the determination of excess emissions.

14. Monitoring Requirement On and after April 17, 2006, the permittee shall monitor the following whenever the LVHC or HVLC systems are operating: [OAR 340-218-0050(3)(a)]

14.a. All periods in which any equipment included in the LVHC and HVLC systems is operating shall be recorded.

14.b. All periods in which a Startup, Shutdown or Malfunction of the control device(s) is occurring shall be recorded;

14.c. All periods in which the LVHC and/or HVLC system is operating and a control device is not in use shall be recorded;

14.d. All periods in which a control device is in use but is functioning outside the required parameter range shall be recorded; and

14.e. All periods of bypassing from the LVHC or HVLC main vent valve(s).

14.e.i. Bypassing shall be monitored at least once every 15 minutes by use of a flow indicating device installed in each bypass line, or by use of any indicating device(s) that provide(s) a positive indication of bypassing. [40 CFR 63.450(d)]

14.e.ii. The duration of the use of bypass valves on computer controlled valves. [40 CFR 63.454(b)(12)]

14.f. Recordkeeping The permittee shall maintain records of the information specified in this Condition. [OAR 340-218-0050(3)(b)]

14.f.i. The total operating time of the pulping system during each semi-annual period, calculated as the total of all periods in which any part(s) of the LVHC or HVLC systems were operating [40 CFR 63.10(c)(13)].

14.f.ii. The date, time and duration of all periods in which the LVHC and/or HVLC system was operating and a control device was not in use.

14.f.iii. The date, time and duration of all periods in which a control device was in use but was functioning outside the required parameter range.

14.f.iv. The date, time and duration of all periods of bypassing from the LVHC or HVLC main vent valve(s). [40 CFR 63.454(b)]

Subpart A recordkeeping

14.f.v. the occurrence and duration of each startup, shutdown or malfunction [40 CFR 63.10(b)(2)(i)];

14.f.vi. the occurrence and duration of each malfunction of air pollution control equipment [40 CFR 63.10(b)(2)(ii)];

14.f.vii. all major maintenance performed on the air pollution control equipment [40 CFR 63.10(b)(2)(iii)].

14.f.viii. actions taken during periods of startup, shutdown or malfunction when such actions are different from procedures specified in the SSM plan [40 CFR 63.10(b)(2)(iv)];

14.f.ix. actions taken during periods of startup, shutdown or malfunction when such actions are consistent with procedures specified in the SSM plan [40 CFR 63.10(b)(2)(v)].

14.f.x. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occur during startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(7)];

14.f.xi. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occurs during periods other than startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(8)];

14.f.xii. the nature and cause of any malfunction (if known) [40 CFR 63.10(c)(10)];

14.f.xiii. the corrective action taken or preventive measures adopted [40 CFR 63.10(c)(11))].

Thermal Oxidizer - Reduce HAPs by 98 percent or more by weight

15. Applicable Requirement Each thermal oxidizer used to comply with 13.d.i shall reduce total HAP emissions by 98 percent or more by weight. The operating requirements in this Condition apply only during periods when the thermal oxidizer is being used to comply with Condition 13.d.i. [40 CFR 63.443(d)(1)];

16. Monitoring Requirement If a thermal oxidizer is used to comply with Condition 13.d.i, then the permittee shall conduct source tests of the thermal oxidizer gas influent and effluent in accordance with the following: [OAR 340-218-0050(3)(a) and 40 CFR 63.7]

16.a. Source tests shall be conducted on the following schedule:

16.a.i. Not later than October 12, 2001, an initial performance (source) test shall be conducted.

16.a.ii. Thereafter, the permittee shall conduct at least one source test every other calendar year.

16.b. The source tests shall simultaneously determine the mass of methanol entering and exiting the thermal oxidizer; destruction efficiency shall be calculated from these measurements.

16.c. During the source tests the pulp production rate shall be at least 90 percent of the previous calendar year's average annual rate (ADUT), unless otherwise specified in the source test plan and approved by the Department.

16.d. The CMS required in Condition 18 shall be operated during the test and the CMS output shall be monitored.

16.e. The source tests shall follow the procedures in Condition 51, unless otherwise approved in writing by the Department.

16.f. Recordkeeping The permittee shall retain the following records of each source test and make them available upon request: [OAR 340-218-0050(3)(b)]

16.f.i. source test results;

16.f.ii. CMS outputs during the source test;

16.f.iii. the previous calendar year's annual average pulp production rate; and

16.f.iv. the pulp production rate (ADUT) during the source test.

17. Applicable Requirement If a thermal oxidizer is used to comply with Condition 13.d.i, then the permittee shall operate the thermal oxidizer within the parameter range determined in accordance with this condition, as a 3-hour block average. [40 CFR 63.443(d)(1) and 40 CFR 63.453(n)]

Establishing and Changing Operating Parameters

17.a. Not later than October 12, 2001, the permittee shall establish an operating parameter range for the thermal oxidizer in accordance with Condition 17.d. .

17.b. Not later than October 13, 2006, the permittee shall establish or re-establish an operating parameter range for the thermal oxidizer in accordance with Condition 17.d. .

17.c. The permittee may voluntarily re-establish the operating parameter range for the thermal oxidizer by following the procedure in Condition 17.d. . The revised operating parameter range will be effective from the date of the source test used to establish the operating parameter range.

17.d. The operating parameter range shall be established or re-established as follows:

17.d.i. The operating parameter range shall be not less than the lowest 3-hour average combustion chamber temperature monitored during a relevant source test that returned a compliant result.

17.d.i.(1) If compliance and monitoring are based on 3-hour block averages, then individual 1-hour source test runs that returned a non-compliant result may be used to expand the parameter range, provided that the average of the 3 test runs showed compliance.

17.d.ii. Relevant source tests include:

17.d.ii.(1) all performance and/or source tests required by this permit, and

17.d.ii.(2) all voluntary source tests conducted at any time that substantially comply with the source testing requirements in this permit, provided that the permittee can demonstrate to the Department's satisfaction that the source test(s) were conducted during representative source operation.

17.d.iii. Operating parameter ranges established with only the LVHC system connected to the thermal oxidizer are invalid after the initial performance test with the HVLC system connected is performed.

18. Monitoring Requirement If a thermal oxidizer is used to comply with Condition 13.d.i, then the permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a CMS to measure the combustion temperature for each thermal oxidizer used to comply with Condition 13.d.i. [40 CFR 63.453(b) and OAR 340-218-0050(3)(a)]

18.a. The CMS shall be installed, operational and the data verified either prior to or in conjunction with conducting the initial performance test. [40 CFR 63.8(c)(3)]

18.b. Temperature shall be monitored during all periods when the thermal oxidizer is being used to comply with Condition 13.d.i.

18.c. Temperature shall be monitored in the firebox or in the ductwork immediately downstream of the firebox and before any substantial heat exchange occurs. [40 CFR 63.453(b)]

18.d. Temperature data shall be reduced to a 3-hour block average. A one hour period means any 60 minute period commencing on the hour.

18.e. The CMS shall include a continuous recorder. [40 CFR 63.453(d)]

18.f. Recordkeeping The permittee shall record the following: [OAR 340-218-0050(3)(b)]

18.f.i. Each hourly value of the 3-hour block average temperature.

18.f.ii. The operating parameter range, and the date on which the operating parameter range was established or re-established.

Subpart A recordkeeping

18.f.iii. the occurrence and duration of each startup, shutdown or malfunction [40 CFR 63.10(b)(2)(i)];

18.f.iv. the occurrence and duration of each malfunction of air pollution control equipment [40 CFR 63.10(b)(2)(ii)];

18.f.v. all major maintenance performed on the air pollution control equipment [40 CFR 63.10(b)(2)(iii)].

18.f.vi. actions taken during periods of startup, shutdown or malfunction when such actions are different from procedures specified in the SSM plan [40 CFR 63.10(b)(2)(iv)];

18.f.vii. actions taken during periods of startup, shutdown or malfunction when such actions are consistent with procedures specified in the SSM plan [40 CFR 63.10(b)(2)(v)].

18.f.viii. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occur during startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(7)];

18.f.ix. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occurs during periods other than startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(8)];

18.f.x. the nature and cause of any malfunction (if known) [40 CFR 63.10(c)(10)];

18.f.xi. the corrective action taken or preventive measures adopted [40 CFR 63.10(c)(11))].

18.f.xii. each period in which a CMS is malfunctioning or inoperative (including out of control periods) [40 CFR 63.10(b)(2)(vi)];

18.f.xiii. all required measurements needed to demonstrate compliance with a relevant standard, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(vii)];

18.f.xiv. all measurements as may be necessary to determine the conditions of performance tests and performance evaluations, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(ix)];

18.f.xv. all CMS calibration checks [40 CFR 63.10(b)(2)(x)];

18.f.xvi. all adjustments and maintenance performed on CMS [40 CFR 63.10(b)(2)(xi)];

18.f.xvii. all required CMS measurements [40 CFR 63.10(c)(1)];

18.f.xviii. the date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks [40 CFR 63.10(c)(5)];

18.f.xix. the nature of the repairs or adjustments to the CMS that was inoperative or out of control [40 CFR 63.10(c)(12)];

Thermal Oxidizer - Reduce HAPs to 20 ppm or less

19. Applicable Requirement Each thermal oxidizer used to comply with Conditions 11.c.i or 13.d.ii shall reduce the total HAP concentration to 20 ppm by volume or less, corrected to 10 percent oxygen. The operating requirements in this Condition apply only during periods when the thermal oxidizer is being used to comply with Condition 11.c.i or 13.d.ii. [40 CFR 63.443(d)(2)];

20. Monitoring Requirement If a thermal oxidizer is used to comply with Condition 11.c.i or 13.d.ii, then the permittee shall conduct source tests of the thermal oxidizer gas effluent in accordance with the following: [OAR 340-218-0050(3)(a)]

20.a. Source tests shall be conducted on the following schedule:

20.a.i. Not later than October 12, 2001, an initial performance (source) test shall be conducted.

20.a.ii. Thereafter, the permittee shall conduct at least one source test every other calendar year.

20.b. The source tests shall determine the concentration of methanol and oxygen at the outlet of the thermal oxidizer; the outlet methanol concentration shall be corrected to 10 percent oxygen.

20.c. During the source tests the pulp production rate (ADUT) shall be at least 90 percent of the previous calendar year's average annual rate, unless otherwise specified in the source test plan and approved by the Department.

20.d. The CMS's required in Condition 22 shall be operated during the source test and the CMS output shall be monitored.

20.e. The source tests shall follow the procedures in Condition 51, unless otherwise approved in writing by the Department.

20.f. Recordkeeping The permittee shall retain the following records of each source test and make them available upon request: [OAR 340-218-0050(3)(b)]

20.f.i. source test results;

20.f.ii. CMS outputs during the source test;

20.f.iii. the previous calendar year's annual average pulp production rate (ADUT); and

20.f.iv. the pulp production rate (ADUT) during the source test.

21. Applicable Requirement If a thermal oxidizer is used to comply with Condition 11.c.i or 13.d.ii, then the permittee shall operate the thermal oxidizer within the parameter range established in accordance with this condition as a 3-hour block average. [40 CFR 63.443(d)(2) and 40 CFR 63.453(n)]

Establishing and Changing Operating Parameters

21.a. Not later than October 12, 2001, the permittee shall establish an operating parameter range for the thermal oxidizer in accordance with Condition 21.d. .

21.b. Not later than October 13, 2006, the permittee shall establish or re-establish an operating parameter range for the thermal oxidizer in accordance with Condition 21.d. .

21.c. The permittee may voluntarily re-establish the operating parameter range for the thermal oxidizer by following the procedure in Condition 21.d. . The revised operating parameter range will be effective from the date of the source test used to establish the operating parameter range.

21.d. The operating parameter range shall be established or re-established as follows:

21.d.i. The operating parameter range shall be not less than the lowest 3-hour average combustion chamber temperature monitored during a relevant source test that returned a compliant result.

21.d.ii. If compliance and monitoring are based on 3-hour block averages, then 1-hour source test runs that returned a non-compliant result may be used to expand the parameter range, provided that the average of the test runs showed compliance.

21.d.iii. Relevant source tests include:

21.d.iii.(1) all performance and/or source tests required by this permit, and

21.d.iii.(2) all voluntary source tests conducted at any time that substantially comply with the source testing requirements in this permit, provided that the permittee can demonstrate to the Department's satisfaction that the source test(s) were conducted during representative source operation.

21.d.iv. Operating parameter ranges established with only the LVHC system connected to the thermal oxidizer are invalid after the initial performance test with the HVLC system connected is performed.

22. Monitoring Requirement If a thermal oxidizer is used to comply with Condition 11.c.i or 13.d.ii, then the permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a CMS to measure the combustion temperature for each thermal oxidizer used to comply with Condition 11.c.i or 13.d.ii. [40 CFR 63.453(b) and OAR 340-218-0050(3)(a)]

22.a. The CMS shall be installed, operational and the data verified either prior to or in conjunction with conducting the initial performance test. [40 CFR 63.8(c)(3)]

22.b. Temperature shall be monitored during all periods when the thermal oxidizer is being used to comply with Conditions 11.c.i or 13.d.ii.

22.c. Temperature shall be monitored in the firebox or in the ductwork immediately downstream of the firebox and before any substantial heat exchange occurs. [40 CFR 63.453(b)]

22.d. Temperature data shall be reduced to a 3-hour block average. A one hour period means any 60 minute period commencing on the hour.

22.e. The CMS shall include a continuous recorder. [40 CFR 63.453(d)]

22.f. Recordkeeping The permittee shall record the following: [OAR 340-218-0050(3)(b)]

22.f.i. Each value of the 3-hour block average temperature.

22.f.ii. The operating parameter range, and the date on which the operating parameter range was established or re-established.

Subpart A recordkeeping

22.f.iii. the occurrence and duration of each startup, shutdown or malfunction [40 CFR 63.10(b)(2)(i)];

22.f.iv. the occurrence and duration of each malfunction of air pollution control equipment [40 CFR 63.10(b)(2)(ii)];

22.f.v. all major maintenance performed on the air pollution control equipment [40 CFR 63.10(b)(2)(iii)].

22.f.vi. actions taken during periods of startup, shutdown or malfunction when such actions are different from procedures specified in the SSM plan [40 CFR 63.10(b)(2)(iv)];

22.f.vii. actions taken during periods of startup, shutdown or malfunction when such actions are consistent with procedures specified in the SSM plan [40 CFR 63.10(b)(2)(v)].

22.f.viii. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occur during startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(7)];

22.f.ix. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occurs during periods other than startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(8)];

22.f.x. the nature and cause of any malfunction (if known) [40 CFR 63.10(c)(10)];

22.f.xi. the corrective action taken or preventive measures adopted [40 CFR 63.10(c)(11))].

22.f.xii. each period in which a CMS is malfunctioning or inoperative (including out of control periods) [40 CFR 63.10(b)(2)(vi)];

22.f.xiii. all required measurements needed to demonstrate compliance with a relevant standard, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(vii)];

22.f.xiv. all measurements as may be necessary to determine the conditions of performance tests and performance evaluations, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(ix)];

22.f.xv. all CMS calibration checks [40 CFR 63.10(b)(2)(x)];

22.f.xvi. all adjustments and maintenance performed on CMS [40 CFR 63.10(b)(2)(xi)];

22.f.xvii. all required CMS measurements [40 CFR 63.10(c)(1)];

22.f.xviii. the date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks [40 CFR 63.10(c)(5)];

22.f.xix. the nature of the repairs or adjustments to the CMS that was inoperative or out of control [40 CFR 63.10(c)(12)];

BLEACHING SYSTEM REQUIREMENTS

Summary of requirements

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Averaging Time	Testing Condition	Monitoring Condition
40 CFR 63.440(d)	24	Chlorine	Capture and control bleach plant HAPs	n/a	n/a	25
40 CFR 63.445(c)(2)	26	Chlorine	Not more than 10 ppm	3 hour	27	n/a
40 CFR 63.445(c) and 40 CFR 63.453(n)	28	Scrubber parameter ranges	See Condition 28	3 hour	n/a	29
40 CFR 63.445(d)(2)	30	Chloroform	See Condition 30	n/a	n/a	31

23. This condition lists the bleach plant equipment that is subject to the 40 CFR Part 63, Subpart S requirements in this permit. [40 CFR Part 63, Subpart S]

Bleach Plant Equipment
D0 Stage
D1 Stage
D2 Stage (if chlorinated bleaching compounds are added at this stage)

24. Applicable Requirement On and after April 16, 2001, each bleaching stage listed in Condition 23 where chlorinated bleaching compounds are introduced shall be enclosed and vented into a closed-vent system and routed to a control device. [40 CFR 63.440(d) and 40 CFR 63.445(b)]

24.a. The enclosures and closed-vent system shall meet the requirements specified in Condition 42.

24.b. The control device shall meet the requirements specified in Condition 26.

25. Monitoring Requirement The permittee shall monitor computer controlled bypass valves and periods of bypassing from the bleaching system closed vent system as follows: [OAR 340-218-0050(3)(a)]

25.a. The position(s) of computer controlled bypass valve(s) shall be monitored at least once every 15 minutes.

25.b. Bypassing shall be monitored at least once every 15 minutes by use of a flow monitoring device installed in each bypass line, or by use of any monitoring device(s) that provide(s) a positive indication of bypassing. [40 CFR 63.450(d)(1)]

25.c. Recordkeeping The permittee shall record the duration of the use of bypass valves on computer controlled valves associated with the bleaching system closed vent system at all times when the bleach plant is operating. [40 CFR 63.454(b) and OAR 340-218-0050(3)(b)]

Subpart A recordkeeping

25.c.i. the occurrence and duration of each startup, shutdown or malfunction [40 CFR 63.10(b)(2)(i)];

25.c.ii. the occurrence and duration of each malfunction of air pollution control equipment [40 CFR 63.10(b)(2)(ii)];

25.c.iii. all major maintenance performed on the air pollution control equipment [40 CFR 63.10(b)(2)(iii)].

25.c.iv. actions taken during periods of startup, shutdown or malfunction when such actions are different from procedures specified in the SSM plan [40 CFR 63.10(b)(2)(iv)];

25.c.v. actions taken during periods of startup, shutdown or malfunction when such actions are consistent with procedures specified in the SSM plan [40 CFR 63.10(b)(2)(v)].

25.c.vi. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occur during startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(7)];

25.c.vii. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occurs during periods other than startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(8)];

25.c.viii. the nature and cause of any malfunction (if known) [40 CFR 63.10(c)(10)];

25.c.ix. the corrective action taken or preventive measures adopted [40 CFR 63.10(c)(11))].

25.c.x. each period in which a CMS is malfunctioning or inoperative (including out of control periods) [40 CFR 63.10(b)(2)(vi)];

25.c.xi. all required measurements needed to demonstrate compliance with a relevant standard, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(vii)];

25.c.xii. all measurements as may be necessary to determine the conditions of performance tests and performance evaluations, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(ix)];

25.c.xiii. all CMS calibration checks [40 CFR 63.10(b)(2)(x)];

25.c.xiv. all adjustments and maintenance performed on CMS [40 CFR 63.10(b)(2)(xi)];

25.c.xv. all required CMS measurements [40 CFR 63.10(c)(1)];

25.c.xvi. the date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks [40 CFR 63.10(c)(5)];

25.c.xvii. the nature of the repairs or adjustments to the CMS that was inoperative or out of control [40 CFR 63.10(c)(12)];

26. Applicable Requirement The control device(s) used to reduce total HAP emissions from each bleaching stage where chlorinated bleaching compounds are introduced shall achieve a treatment device outlet concentration of 10 ppm or less by volume of total chlorinated HAP, measured as chlorine. [40 CFR 63.445(c)(2)]

27. Monitoring Requirement The permittee shall conduct source tests of each bleach plant scrubber gas effluent in accordance with the following: [OAR 340-218-0050(3)(a)]

27.a. Not later than October 12, 2001, an initial performance (source) test shall be conducted. Thereafter, the permittee shall conduct at least one source test every other calendar year.

27.b. The source tests shall be for chlorine, using Method 26A or other method approved by EPA.

27.c. The CMS's required in Condition 29 shall be operated during the source test and the CMS outputs shall be monitored.

27.d. The source tests shall follow the procedures in Condition 51, unless otherwise approved in writing by the Department.

27.e. Recordkeeping The permittee shall retain source test results and the CMS outputs during the source test and make them available upon request. [OAR 340-218-0050(3)(b)]

28. Applicable Requirement The permittee shall operate the bleach plant scrubber(s) within the parameter ranges established in accordance with this Condition, as a 3-hour block average. [40 CFR 63.445(c) and 40 CFR 63.453(n)]

Establishing and Changing Operating Parameters

28.a. Not later than October 12, 2001, the permittee shall establish operating parameter ranges for the bleach plant scrubber(s) in accordance with Condition 28.c. .

28.b. The permittee may voluntarily re-establish the operating parameter range for the bleach plant scrubber by following the procedure in Condition 28.c. . The revised operating parameter range will be effective from the date of the source test used to establish the operating parameter range.

28.c. The operating parameter ranges shall be established or re-established as follows:

28.c.i. The operating parameter ranges shall be established from parameter monitoring results obtained during source tests conducted in accordance with Condition 51 that return compliant results, and shall conform with the following:

28.c.i.(1) The scrubber liquid effluent:

28.c.i.(1)(a) pH shall not be lower than the lowest scrubber effluent pH monitored during a source test, as a 3-hour average; or

28.c.i.(1)(b) ORP shall not be higher than the highest effluent ORP monitored during a source test, as a 3-hour average.

28.c.i.(2) The scrubber fan motor shall be operating.

28.c.i.(3) The gas scrubber influent liquid flow rate shall not be lower than the lowest flow rate monitored during a source test, as a 3-hour average.

28.c.ii. If compliance and monitoring are based on 3-hour block averages, then 1-hour source test runs that returned a non-compliant result may be used to expand the parameter range, provided that the average of the test runs showed compliance.

28.c.iii. Relevant source tests include:

28.c.iii.(1) all performance and/or source tests required by this permit, and

28.c.iii.(2) all voluntary source tests conducted at any time that substantially comply with the source testing requirements in this permit, provided that the permittee can demonstrate to the Department's satisfaction that the source test(s) were conducted during representative source operation.

29. Monitoring Requirement The permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a CMS to measure gas scrubber operating parameters as specified below: [OAR 340-218-0050(3)(a) and 40 CFR 63.453(c)]

29.a. The CMS shall be installed, operational and the data verified either prior to or in conjunction with conducting the initial performance test. [40 CFR 63.8(c)(3)]

29.b. Each of the following parameters shall be monitored whenever a bleach plant stage listed in Condition 23 is operating:

29.b.i. The pH or oxidation/reduction potential (ORP) of the scrubber effluent.

29.b.ii. The gas scrubber vent gas inlet flow rate, or one of the following surrogates for gas inlet flow rate: scrubber fan motor on indicator or motor amps.

29.b.iii. The gas scrubber influent liquid flow rate.

29.c. Parameter monitoring data shall be reduced to a 3-hour block average. A one hour period means any 60 minute period commencing on the hour.

29.d. The CMS shall include a continuous recorder. [40 CFR 63.453(d)]

29.e. Recordkeeping The permittee shall record the following: [OAR 340-218-0050(3)(b)]

29.e.i. Each 3-hour block average parameter reading.

29.e.ii. All periods of operation outside of allowed parameter ranges.

29.e.iii. Operating parameter ranges and the dates on which the ranges were established.

Subpart A recordkeeping

29.e.iv. the occurrence and duration of each startup, shutdown or malfunction [40 CFR 63.10(b)(2)(i)];

29.e.v. the occurrence and duration of each malfunction of air pollution control equipment [40 CFR 63.10(b)(2)(ii)];

29.e.vi. all major maintenance performed on the air pollution control equipment [40 CFR 63.10(b)(2)(iii)].

29.e.vii. actions taken during periods of startup, shutdown or malfunction when such actions are different from procedures specified in the SSM plan [40 CFR 63.10(b)(2)(iv)];

29.e.viii. actions taken during periods of startup, shutdown or malfunction when such actions are consistent with procedures specified in the SSM plan [40 CFR 63.10(b)(2)(v)].

29.e.ix. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occur during startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(7)];

29.e.x. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occurs during periods other than startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(8)];

29.e.xi. the nature and cause of any malfunction (if known) [40 CFR 63.10(c)(10)];

29.e.xii. the corrective action taken or preventive measures adopted [40 CFR 63.10(c)(11))].

29.e.xiii. each period in which a CMS is malfunctioning or inoperative (including out of control periods) [40 CFR 63.10(b)(2)(vi)];

29.e.xiv. all required measurements needed to demonstrate compliance with a relevant standard, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(vii)];

29.e.xv. all measurements as may be necessary to determine the conditions of performance tests and performance evaluations, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(ix)];

29.e.xvi. all CMS calibration checks [40 CFR 63.10(b)(2)(x)];

29.e.xvii. all adjustments and maintenance performed on CMS [40 CFR 63.10(b)(2)(xi)];

29.e.xviii. all required CMS measurements [40 CFR 63.10(c)(1)];

29.e.xix. the date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks [40 CFR 63.10(c)(5)];

29.e.xx. the nature of the repairs or adjustments to the CMS that was inoperative or out of control [40 CFR 63.10(c)(12)];

30. Applicable Requirement On and after April 16, 2001, the permittee shall introduce no hypochlorite or chlorine for bleaching into the bleaching system. The presence of small amounts of hypochlorite or chlorine that are by-products or residues of chlorine dioxide production or use, or of bleach plant scrubber operation, shall not constitute a violation of this Condition. [40 CFR 63.440(d) & 40 CFR 63.445(d)(2)]

31. Monitoring Requirement By April 30, 2001, the permittee shall submit certification that no hypochlorite or chlorine, other than small amounts of hypochlorite or chlorine that are by-products or residues of chlorine dioxide production or use, or of bleach plant scrubber operation, will be introduced into the bleaching system on and after April 16, 2001. [OAR 340-218-0050(3)(a)]

31.a. Recordkeeping The permittee shall retain a copy of the certification required above, and make it available upon request. [OAR 340-218-0050(3)(b)]

PULPING CONDENSATES REQUIREMENTS

Summary of requirements

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Averaging Time	Testing Condition	Monitoring Condition
40 CFR Part 63, Subpart S and OAR 340-218-0140(1)	32	Condensate stream list	n/a	n/a	n/a	n/a
40 CFR Part 63, Subpart S	33	Condensate collection and treatment averaging period	See Condition 33	n/a	n/a	n/a
40 CFR 63. 440(d)	34	General condensate collection and treatment requirements	See Condition 34	n/a	n/a	n/a
40 CFR 63.453(i)	35	Condensate collection	Collect 11.1 pounds MeOH per ODT of pulp	Per Cond. 33	n/a	36, 37
40 CFR 63.446(e)(3)	34.d.	Condensate treatment requirements	See Condition 34.d.	n/a	n/a	38, 39
40 CFR 63.453(p)	40	Treatment parameter out-of-range requirements	See Condition 40	n/a	n/a	41

32. This condition lists the mill-specific pulping condensate streams that are subject to the 40 CFR Part 63, Subpart S requirements in this permit. [40 CFR Part 63, Subpart S]

Condensate Streams
Kamyr Digester Blow Heat System Condensates
M&D Digester Blow Heat System Condensates
NCG Cooler Underflow (LVHC)
Evaporator Foul Condensates from 5th Effect, 6th/7th Effect and Surface Condensers

33. The averaging period P for determining compliance with the condensate collection and treatment requirements in this permit is 15 days. [40 CFR Part 63, Subpart S]

34. Applicable Requirement On and after April 16, 2002, the permittee shall comply with the following requirements for pulping system condensate collection and treatment. [40 CFR 63.440(d)]

34.a. The pulping process condensates from the equipment systems identified in Condition 32 shall be collected as specified in this Condition and treated to meet the requirements specified in Condition 34.d. [40 CFR 63.446(b)]:

34.b. The pulping process condensates from equipment systems listed in Condition 32 that in total contain a total HAP mass of 5.5 kilograms or more of total HAP per megagram (11.1 pounds per ton) of ODP shall be subject to the requirements of paragraphs (c.) and (d.) of this Condition: [40 CFR 63.446(c)].

34.c. The pulping process condensates specified in Condition 32 shall be conveyed in a closed collection system that is designed and operated to meet the following requirements: [40 CFR 63.446(d)]

34.c.i. The individual drain system requirements specified in Condition 48;

34.c.ii. Vent gases from collection systems shall be routed to a control device designed and operated in accordance with Conditions 11.c and 13.d ;

34.c.iii. Closed vent systems shall be designed and operated in accordance with Condition 42.

34.c.iv. Condensate storage tanks shall be designed and operated in accordance with Condition 43.

34.d. Each pulping process condensate specified in Condition 32 shall be treated according to one of the following options:

34.d.i. Recycle the pulping process condensate to an equipment system specified in Sec. 63.443(a) meeting the requirements specified in Sec. 63.443(c) and (d); or

34.d.ii. Discharge the pulping process condensate below the liquid surface of a biological treatment system meeting the requirement specified in Condition 34.d.iii; or

34.d.iii. Treat the pulping process condensates to remove 5.1 kilograms or more to total HAP per megagram (10.2 pounds per ton) of ODP.

34.d.iv. For the purpose of complying with this treatment requirement, total HAP shall be measured as acetaldehyde, methanol, methyl ethyl ketone and propionaldehyde. [40 CFR 63.446(e)(2) and 63.457(g)]

34.e. Each HAP removed from a pulping process condensate stream during treatment and handling under paragraphs 34.c and 34.d of this Condition, except for those treated according to paragraph 34.d.ii of this Condition, shall be controlled as specified in Conditions 11.a and 11.c or Conditions 13.a, 13.b, and 13.d.

35. Monitoring Requirement - ICCS Procedure Not later than October 12, 2002, the permittee shall demonstrate compliance with the pulping condensate collection requirement by completing an Initial Condensate Characterization Study (ICCS) using the procedures and calculations specified in this Condition. The terms "named streams" and "other streams" are defined in Condition 1. The named streams are listed in Condition 32 . [OAR 340-218-0050(3)(a) and 40 CFR 63.453(i) and 40 CFR 63.7]

35.a. For the initial performance (source) test required by October 12, 2002, the permittee shall notify the Department by submitting a source test plan not less than 60 days before the planned start of the source test. [40 CFR 63.7(b)(1)]

35.b. For the initial performance (source) test required by October 12, 2002, the results of the source test shall be submitted to the Department not more than 60 days following completion of the source test. The source test is considered complete upon completion of all sampling. [40 CFR 63.10(d)(2)]

35.c. For source tests other than the initial performance (source) test required by October 12, 2002, the results of the source test shall be submitted not more 30 days following completion of the source test. The source test is considered complete upon receipt of all sample results. [40 CFR 63.10(d)(2)]

35.d. The permittee may elect to combine all or part of the streams specified in Condition 32 into one or more combined streams, and to monitor the combined stream(s) in lieu of monitoring each individual named stream, subject to the follow restrictions:

35.d.i. the permittee may not combine named streams and other streams prior to the monitoring and sampling location(s); and

35.d.ii. any named streams that are combined for monitoring purposes must be collected and combined at all times except for periods of startup, shutdown or malfunction.

35.e. The permittee shall perform the following monitoring and sampling on the streams specified in Condition 32 over a period of at least P consecutive operating days:

35.e.i. During the selected ICCS (sampling) period, the permittee shall collect samples on at least 25 percent of the days in the sampling period (rounded up to the nearest whole day). Sampling days shall be distributed throughout the sampling period in a random fashion.

35.e.ii. Sampling shall be done as follows: [40 CFR 63.457(c)(3)]

35.e.ii.(1) At least 3 sampling runs shall be made each sampling day at each sampling point;

35.e.ii.(2) Each sampling run shall be for a minimum of a one hour period;

35.e.ii.(3) Samples may be taken continuously or by taking multiple grab samples. If multiple grab samples are taken, they must be taken at approximately equal intervals over the sampling run; and

35.e.ii.(4) The results of the sampling runs shall be averaged or the samples may be composited for each sampling day at each sampling point.

35.e.ii.(5) The samples shall be analyzed for methanol using EPA Method 305, NCASI DI/MeOH 94.02, or an alternative method approved by EPA.

35.e.iii. The flow rate of each sampled stream shall be determined at least once each sampling day.

35.f. The ODT of pulp produced in each digester system shall be monitored each day.

35.g. The tons of black liquor solids (BLS) treated in the evaporator system shall be monitored each day. The tons of BLS shall be converted to equivalent ODT of pulp production using the procedure below:

35.g.i. The permittee shall calculate average daily equivalent ODT of production for the evaporators (EVAPORATOR EQUIVALENT PULP PRODUCTION) for each day in accordance with the following:

35.g.i.(1) Calculate a three-month rolling ODT of production per ton of dry BLS processed by recording the pulp production and the amount of BLS processed on a monthly basis, updating the ratio each month.

35.g.i.(2) If the pulping liquor formulation changes significantly, a new ratio of ODT of production per ton of dry BLS processed shall be developed.

35.g.i.(3) Monitor the tons of dry BLS processed per day.

35.g.i.(4) Multiply the amount of dry BLS processed per day by the ratio of ODT of production per ton of dry BLS processed to obtain the average daily equivalent ODT of production.

35.g.ii. The number of hours each stream is collected shall be monitored every day for the entire ICCS period. Alternatively, if the streams are collected continuously, the permittee may monitor the number of hours each day that a stream or streams is not collected.

35.g.iii. The amount of pulp produced shall be monitored every day for the entire ICCS period, as ODTP.

35.h. The permittee shall perform the following calculations*:
(* Notes: Calculations are described in general terms only; use of appropriate units and conversion factors is assumed. Metric units may be substituted for English units.)

35.h.i. For each collected stream:

35.h.i.(1) determine the daily average concentration of methanol from the daily composite sample.

35.h.i.(2) calculate the daily pounds of methanol per ton or equivalent ton of pulp produced as the daily average concentration times the daily flow divided by the production for each sampling day. The daily flow shall be corrected for any periods of non-collection.

35.h.i.(3) calculate the arithmetic average and the standard deviation of the daily pounds of methanol per ton/ equivalent ton of pulp over the entire ICCS period. The average pounds of methanol per ton or equivalent ton of pulp values over the entire ICCS period are the emission factors (EFi) for each stream.

35.h.i.(4) calculate the daily pounds of methanol collected every day during the ICCS period as the EFi for each stream times the applicable production rate. The daily pounds of methanol collected from each stream shall be corrected for any periods of non-collection.

35.h.ii. Calculate the total pounds of methanol collected during the ICCS by summing the total methanol collected for the number of streams collected.

35.h.iii. Calculate the total pulp production during the ICCS by summing up the daily pulp production.

35.h.iv. Calculate the amount of methanol collected per ODTP by dividing the total methanol collected during the ICCS by the total pulp production during the ICCS.

35.h.v. If the initial averaging period P exceeds 30 days, the permittee shall also comply with Condition 35.k. .

35.i. If the permittee wishes to collect and treat "other streams", the procedure described above shall be used to determine the emission factor(s).

35.j. The initial emission factors and averaging period shall be used retroactively from the end of the ICCS period.

Establishing and changing emission factors and/or P

35.k. If the initial condensate collection averaging period P in Condition 33 is greater than 30 days, the permittee shall submit a permit modification request to the Department not later than 14 months after beginning the daily monitoring required by Condition 36. The permit modification request shall include the following:

35.k.i. A request to establish a condensate collection averaging period P that does not exceed 30 days; or

35.k.ii. A request to continue the previous condensate collection averaging period, or establish a different condensate collection averaging period P that is greater than 30 days, but not greater than 60 days. The request shall include sufficient condensate sample results to demonstrate that condensate collection variability is not due to undercollection. The report shall include monitoring information over a period of at least 12 months, and an analysis of the data to support the permittee's requested averaging period.

35.k.iii. The new condensate collection averaging period, P, becomes effective upon issuance of a permit modification.

35.l. The permittee may change the condensate collection averaging period, P, using the following procedure:

35.l.i. Submit a permit modification request to revise the condensate collection and treatment averaging period, P in Condition 33;

35.l.ii. If the permittee is requesting a condensate collection averaging period that is greater than 30 days, the request shall include sufficient condensate sample results to demonstrate that condensate collection variability is not due to undercollection. The report shall include monitoring information over a period of at least 12 months, and an analysis of the data to support the permittee's requested averaging period. The condensate collection averaging period shall not exceed 60 days.

35.l.iii. The new condensate collection averaging period, P, becomes effective upon issuance of a permit modification.

35.m. In the event that a process change is made that requires submittal of a construction notice (e.g., a Notice of Approval application or construction permit application), and that would reasonably be expected to alter the methanol concentration of any collected stream(s), the permittee shall establish a new emission factor for each affected stream and demonstrate compliance with Condition 34 by doing the following:

35.m.i. Not less than 14 working days after completing the process change, the permittee shall submit an ICCS retest proposal. The retest proposal shall:

35.m.i.(1) describe the process change;

35.m.i.(2) identify the stream(s) to be retested;

35.m.i.(3) shall propose the start date for the retest; and

35.m.i.(4) may allow for a reasonable period of time for the process change to stabilize before the retest.

35.m.ii. Approval of the retest proposal is not required; however, the Department may request additional information up to 5 working days before the proposed start date of the retest.

35.m.iii. The retest shall follow the ICCS procedure (Condition 28) on the affected stream or streams. The retest period shall be P days (the condensate collection averaging period) as specified in Condition 33.

35.m.iv. Upon completion of the retest, the permittee shall submit a report demonstrating that the permittee is in compliance with Condition 34.

35.m.v. In the event that the new emission factor(s) is/are statistically different from the previous emission factor(s) as determined using the procedure in Condition 53 , the permittee shall:

35.m.v.(1) record the new emission factors; and

35.m.v.(2) the permittee shall use the new emission factor(s) retroactively from the beginning of the retest period to show compliance.

35.n. The permittee may voluntarily establish a new emission factor or reestablish an existing emission factor for any condensate stream or streams using the following procedure:

35.n.i. Perform a retest following the ICCS procedure on the affected stream or streams. The retest period shall be P days (the condensate collection averaging period) as specified in Condition 33;

35.n.ii. record the new emission factor(s); and

35.n.iii. the permittee shall use the new emission factor(s) retroactively from the beginning of the retest period to show compliance.

35.o. The permittee may adjust any or all emission factors using verification data and the following procedure:

35.o.i. Data obtained during verification testing may be combined with the data used to determine the current emission factor, provided that all verification data obtained since the most recent ICCS procedure is used (i.e., data may not be selectively omitted);

35.o.ii. record the emission factor(s); and

35.o.iii. the permittee shall use the new emission factor(s) retroactively from the beginning of the most recent verification test to show compliance.

36. Monitoring Requirement Beginning immediately (the next day) after completion of the ICCS, the permittee shall demonstrate compliance with the pulping condensate collection requirements by performing the following monitoring each day: (NOTE: Metric units may be substituted for English units.) [OAR 340-218-0050(3)(a) and 40 CFR 63.453(i)]

36.a. Monitor daily ODT of production as follows:

36.a.i. Monitor daily ODT of pulp production for each digester system; and

36.a.ii. Monitor daily BLS processed in the evaporators and convert to equivalent ODT of pulp as specified in Condition 35.g.i. .

36.b. Monitor the number of hours each day that each named stream specified in Condition 32 is collected. Alternatively, if the streams are collected continuously, the permittee may monitor the number of hours each day that a stream or streams is not collected.

36.c. For each collected stream, calculate the daily pounds of methanol collected as the emission factor (EFi) times the tons or equivalent tons of pulp produced. The daily pounds of methanol collected from each stream shall be corrected for any periods of non-collection or losses from the collection system.

36.d. Calculate the total pounds of methanol collected during the preceding P days by summing the total methanol collected over that period for each stream over the number of streams collected. P is the condensate collection averaging period in Condition 33.

36.e. Calculate the total ODT of pulp production during the preceding P days by summing up the daily ODT of pulp production over that period.

36.f. Calculate the amount of methanol collected per ODTP by dividing the total methanol collected during the preceding P days by the total pulp production during the same period.

36.g. Recordkeeping The permittee shall maintain the following records:

36.g.i. The condensate stream emission factors and standard deviations, and the dates on which the emission factors became effective.

Daily recordkeeping

36.g.ii. ODT of pulp production.

36.g.iii. ODT of pulp production from each digester system.

36.g.iv. BLS processed in the evaporator system and the equivalent ODT of pulp production as specified in Condition 35.g.i. .

36.g.v. The number of hours that each collected condensate stream is collected.

36.g.vi. For each collected stream, record the pounds of methanol collected.

36.g.vii. Record the total pounds of methanol collected from all streams during the preceding P days.

36.g.viii. Record the total pulp production during the preceding P days.

36.g.ix. Record the amount of methanol collected per ODTP for the preceding P days.

Subpart A recordkeeping

36.g.x. the occurrence and duration of each startup, shutdown or malfunction [40 CFR 63.10(b)(2)(i)];

36.g.xi. the occurrence and duration of each malfunction of air pollution control equipment [40 CFR 63.10(b)(2)(ii)];

36.g.xii. all major maintenance performed on the air pollution control equipment [40 CFR 63.10(b)(2)(iii)].

36.g.xiii. actions taken during periods of startup, shutdown or malfunction when such actions are different from procedures specified in the SSM plan [40 CFR 63.10(b)(2)(iv)];

36.g.xiv. actions taken during periods of startup, shutdown or malfunction when such actions are consistent with procedures specified in the SSM plan [40 CFR 63.10(b)(2)(v)].

36.g.xv. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occur during startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(7)];

36.g.xvi. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occurs during periods other than startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(8)];

36.g.xvii. the nature and cause of any malfunction (if known) [40 CFR 63.10(c)(10)];

36.g.xviii. the corrective action taken or preventive measures adopted [40 CFR 63.10(c)(11))].

36.g.xix. each period in which a CMS is malfunctioning or inoperative (including out of control periods) [40 CFR 63.10(b)(2)(vi)];

36.g.xx. all required measurements needed to demonstrate compliance with a relevant standard, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(vii)];

36.g.xxi. all measurements as may be necessary to determine the conditions of performance tests and performance evaluations, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(ix)];

36.g.xxii. all CMS calibration checks [40 CFR 63.10(b)(2)(x)];

36.g.xxiii. all adjustments and maintenance performed on CMS [40 CFR 63.10(b)(2)(xi)];

36.g.xxiv. all required CMS measurements [40 CFR 63.10(c)(1)];

36.g.xxv. the date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks [40 CFR 63.10(c)(5)];

36.g.xxvi. the nature of the repairs or adjustments to the CMS that was inoperative or out of control [40 CFR 63.10(c)(12)];

37. Monitoring Requirement [This Condition is applicable only if the permittee elects to comply with Condition 34.b].

37.a. Following completion of the ICCS, the permittee shall periodically verify the condensate stream emission factors (EFi) as required in this Condition. [OAR 340-218-0050(3)(a)]

37.b. The verification frequency shall be determined for each calendar year as follows:

37.b.i. Not later than January 15 of each year, the permittee shall calculate the value of "d", using the procedure in Condition 52.

37.b.ii. The test frequency for that year shall be determined from the table below:

Value of "d"	Confidence	Number of tests per year	Verification frequency
Less than 1.00	<84.1%	4	Once each calendar quarter
1.00 to 1.99	84.1-97.7%	2	Once in 1st and 3rd calendar quarter
2.00 to 2.33	97.7-99.0%	1	Once in 1st calendar quarter
Greater than 2.33	>99.0%	0 *	None required that year

* In the event that the permittee calculates a value of "d" greater than 2.33 for five consecutive calendar years, at least one verification test shall be conducted within that five year period. Counting begins immediately after the last verification test or ICCS procedure.

37.c. The verification sampling period shall begin within the first 20 days of a calendar quarter (i.e., during the periods January 1 – 20; April 1-20; July 1-20; and/or October 1-20). The sampling procedures required in this Condition, including any of the test extensions that may be required below, must be completed within two calendar quarters.

37.d. The permittee shall perform the following monitoring on all of the currently collected condensate streams (both "named" and "other") over a sampling period of at least 15 consecutive operating days:

37.d.i. During the sampling period, the permittee shall collect samples on at least 25 percent of the days in the sampling period (rounded up to the next whole day). Sampling days shall be spread throughout the sampling period in a random fashion.

37.d.ii. Sampling shall be done as follows: [40 CFR 63.457(c)(3)]

37.d.ii.(1) At least 3 sampling runs shall be made each sampling day at each sampling point;

37.d.ii.(2) Each sampling run shall be for a minimum of a one hour period;

37.d.ii.(3) Samples may be taken continuously or by taking multiple grab samples. If multiple grab samples are taken, they must be taken at approximately equal intervals over the sampling run; and

37.d.ii.(4) The results of the sampling runs shall be averaged or the samples may be composited for each sampling day at each sampling point.

37.d.ii.(5) The samples shall be analyzed for methanol using EPA Method 305, NCASI DI/MeOH 94.02, or an alternative method approved by EPA.

37.e. The permittee shall use the procedure in Condition 53 to verify the EF for each stream.

37.f. In the event that the EF for any stream or streams is not verified by the procedure above, the permittee shall extend the verification procedure described in Conditions 37.d and 37.e subject to the following:

37.f.i. The verification period shall be extended in blocks of at least 15 consecutive days, except that the total verification period shall not be greater than P days (the condensate collection averaging period) as specified in Condition 33.

37.f.ii. The data from the initial verification period and all extensions (if any) for the calendar quarter in question shall be combined.

37.f.iii. Verification extensions shall begin within 7 calendar days of receiving the previous period's sampling results, or within 30 days of the previous sampling period, whichever is later.

37.g. If the combined data from extended verification testing still fails to verify the EF, the permittee shall establish a new EF for each one that was not verified, in accordance with the following:

37.g.i. The permittee shall use the ICCS procedure (Condition 35) over a sampling period of not less than P days (the condensate collection averaging period).

37.g.ii. The permittee may use the data collected during the most recent verification testing, including extensions, to fulfill all of part of the ICCS data requirements.

37.g.iii. Upon completion of the ICCS procedure, the permittee shall record the revised emission factor(s).

37.g.iv. The permittee shall use the new emission factor(s) retroactively to the beginning of the calendar quarter in which the verification testing in question was begun.

37.h. Failure to verify an emission factor does not in and of itself constitute a violation of this permit.

37.i. The permittee may combine the data collected for EF verification with the data that was used to determine the current EF(s). The following procedure shall be used:

37.i.i. All data from all successful verification tests of the current EF must be used;

37.i.ii. The permittee shall calculate the average and standard deviation of the combined data;

37.i.iii. The permittee shall record the revised emission factor(s) and standard deviation(s); and

37.i.iv. The permittee shall use the revised emission factor(s) retroactively to the beginning of the calendar quarter in which the most recent verification data was obtained.

37.j. Recordkeeping The permittee shall retain the following records:

37.j.i. The condensate stream emission factors and standard deviations, and the dates on which the emission factors became effective.

37.j.ii. each value of "d" and the number of verification tests required each year;

37.j.iii. all verification sampling results;

37.j.iv. all verification calculations and whether or not verification was successful;

37.j.v. the number of samples used to determine the current EFs, including the number of samples used to initially determine the EFs, plus the number of verification samples used, if any.

Condensate Biological Treatment

Initial and Quarterly Performance Tests

38. Monitoring Requirement The permittee shall conduct initial and quarterly performance tests in accordance with this condition.

38.a. Performance tests shall be performed on the schedule below: [OAR 340-218-0050(3)(a) and 40 CFR 63.453(j) and 40 CFR 63.7]

38.a.i. not later than October 12, 2002, the permittee shall complete an initial performance test of the open biological treatment system; and

38.a.ii. after October 12, 2002, the permittee shall conduct a performance test within the first 45 days of each quarter; and

38.a.iii. the permittee may conduct additional performance tests at any time.

38.b. Sampling for the performance test shall be performed over a period of 3 consecutive days;

38.c. At least one grab sample shall be taken at each sampling point on each sampling day. If more than one sample is taken at each sampling point, the samples at each point shall be averaged or the samples may be composited for each sampling day.

38.d. For each sampling day, perform the mass removal test procedures specified in 40 CFR 63.457(l)(2) for total HAP, and calculate the daily HAP mass removal. [40 CFR 63.457(l)]

38.e. Samples shall be analyzed as follows:

38.e.i. Samples for the initial performance test and the quarterly performance tests conducted in the first quarter (annually) shall be performed for total HAP (acetaldehyde, methanol, methyl ethyl ketone and propionaldehyde).

38.e.ii. Samples for the quarterly performance tests conducted in the second, third and fourth quarters may be analyzed for total HAP as specified above, or may be analyzed using the applicable methanol procedure in 40 CFR 63.457(l)(1) or (2) and the value of r determined during the first quarter test instead of measuring the additional HAP to determine a new value of r.

38.f. For each sampling day, perform the procedures specified in sections III. C. and D. of Appendix E of 40 CFR Part 63 Subpart S for nonthoroughly mixed open biological treatment systems. [40 CFR 63.457(l)(3)]

38.g. Perform the relevant procedures specified in section III. G. of Appendix E of 40 CFR Part 63 Subpart S. [40 CFR 63.457(l)(3)]

38.h. On each sampling day, perform the monitoring specified in this Condition. The permittee shall monitor the parameters specified in Option 1, unless alternative parameters have been approved, then monitor as in Option 2.

38.h.i. Option 1, monitor the following:

38.h.i.(1) Composite daily sample of outlet soluble BOD5 concentration to monitor for maximum daily and maximum monthly average;
38.h.i.(2) Mixed liquor volatile suspended solids;
38.h.i.(3) Horsepower of aerator unit(s);
38.h.i.(4) Inlet liquid flow; and
38.h.i.(5) Liquid temperature.

38.h.ii. Option 2, monitor the approved alternate parameters.

38.i. Upon completion of the sampling period, calculate the arithmetic average of the daily HAP mass removal rate.

Operating Parameters and Ranges

38.j. Operating parameters and ranges shall be established or revised as follows:

38.j.i. The following notification procedures must be followed in addition to any other notifications that may be required: [40 CFR 63.455(e)]

38.j.i.(1) The permittee must give at least 15 calendar days notice in writing before conducting the performance test; and

38.j.i.(2) The permittee must confirm the exact time and date of the performance test no less than 24 hours before conducting the performance test. Confirmation may be by telephone or fax.

38.j.ii. Operating parameters and/or ranges may only be established or revised from monitoring results obtained during tests that return a compliant result.

38.j.iii. Operating parameter ranges shall be not less than the lowest, nor greater than the highest (as appropriate) average value(s) of the operating parameter(s) recorded during the performance test(s) conducted per this Condition.

38.j.iv. Operating parameters and/or ranges established or revised pursuant to this condition are effective from the date following the last sampling date.

38.j.v. The permittee shall comply with one of the options below:

38.j.v.(1) Option 1: The permittee shall establish operating parameter ranges for all of the following parameters:

38.j.v.(1)(a) Composite daily outlet soluble BOD5 concentration;
38.j.v.(1)(b) Mixed liquor volatile suspended solids;
38.j.v.(1)(c) Horsepower of aerator unit(s);

38.j.v.(2) Option 2: The permittee may propose to monitor one or more alternate operating parameters and establish ranges for the alternative parameters. If the permittee chooses this option, the permittee shall submit a request for approval of the proposed alternate parameters with, or prior to, the initial performance test report.

Notifications and Submittals

38.k. Pretest notification and submittal of test results shall be as specified in Condition 51.

38.l. The permittee shall submit the following with, or prior to, the Initial Performance Test report:

38.l.i. a report describing the zones of the open biological treatment system and how the zones were determined; and

38.l.ii. the QA/QC plan as required by Section III.G. of Appendix E of 40 CFR Part 63 Subpart S.

38.m. Recordkeeping The permittee shall record the following:

38.m.i. The date(s) of all performance tests;
38.m.ii. All sampling results;
38.m.iii. The daily mass removal results for total HAP or methanol;
38.m.iv. The arithmetic average mass removal for total HAP or methanol;

38.m.v. All information specified in sections III.C. and D. of Appendix E of 40 CFR Part 63 Subpart S;

38.m.vi. All information specified in section III.G. of Appendix E of 40 CFR Part 63 Subpart S;

38.m.vii. The permittee shall record the parameters specified in Option 1, unless alternative parameters have been approved, then record the parameters in Option 2.

38.m.vii.(1) Option 1, record the following:

38.m.vii.(1)(a) Composite daily sample of outlet soluble BOD5 concentration to monitor for maximum daily and maximum monthly average;

38.m.vii.(1)(b) Mixed liquor volatile suspended solids;

38.m.vii.(1)(c) Horsepower of aerator unit(s);

38.m.vii.(1)(d) Inlet liquid flow; and

38.m.vii.(1)(e) Liquid temperature.

38.m.vii.(2) Option 2, record the approved alternate parameters.

Daily Monitoring

39. Monitoring Requirement On a daily basis, the permittee shall perform the following monitoring procedures under either Option 1 or Option 2 for each open biological treatment system. [OAR 340-218-0050(3)(a) and 40 CFR 63.453(j)(1)]

39.a. Option 1: Monitor the parameters listed below:

39.a.i. Composite daily sample of outlet soluble BOD5 concentration to monitor for maximum daily and maximum monthly average;

39.a.ii. Mixed liquor volatile suspended solids;

39.a.iii. Horsepower of aerator unit(s);

39.a.iv. Inlet liquid flow; and

39.a.v. Liquid temperature.

39.b. Option 2: If the permittee has received approval to monitor alternate parameters, conduct daily monitoring of the site-specific parameters established according to the procedures specified in Condition 38.

39.c. Recordkeeping The permittee shall record the following:

39.c.i. If using Option 1:

39.c.i.(1) Daily composite outlet soluble BOD5 concentration;

39.c.i.(2) Daily mixed liquor volatile suspended solids;

39.c.i.(3) Daily horsepower of aerator unit(s);

39.c.i.(4) Daily inlet liquid flow;

39.c.i.(5) Daily liquid temperature;

39.c.ii. If using Option 2: The value(s) of the approved operating parameter(s).

39.c.iii. The dates of any parameter out-of-range excursions, and the results of the performance test if one is performed.

39.c.iv. Any maintenance or changes made to the process or control device after the beginning of a parameter excursion that would influence the results of the determination.

Subpart A recordkeeping

39.c.v. the occurrence and duration of each startup, shutdown or malfunction [40 CFR 63.10(b)(2)(i)];

39.c.vi. the occurrence and duration of each malfunction of air pollution control equipment [40 CFR 63.10(b)(2)(ii)];

39.c.vii. all major maintenance performed on the air pollution control equipment [40 CFR 63.10(b)(2)(iii)].

39.c.viii. actions taken during periods of startup, shutdown or malfunction when such actions are different from procedures specified in the SSM plan [40 CFR 63.10(b)(2)(iv)];

39.c.ix. actions taken during periods of startup, shutdown or malfunction when such actions are consistent with procedures specified in the SSM plan [40 CFR 63.10(b)(2)(v)].

39.c.x. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occur during startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(7)];

39.c.xi. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances that occurs during periods other than startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(8)];

39.c.xii. the nature and cause of any malfunction (if known) [40 CFR 63.10(c)(10)];

39.c.xiii. the corrective action taken or preventive measures adopted [40 CFR 63.10(c)(11))].

39.c.xiv. each period in which a CMS is malfunctioning or inoperative (including out of control periods) [40 CFR 63.10(b)(2)(vi)];

39.c.xv. all required measurements needed to demonstrate compliance with a relevant standard, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(vii)];

39.c.xvi. all measurements as may be necessary to determine the conditions of performance tests and performance evaluations, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(ix)];

39.c.xvii. all CMS calibration checks [40 CFR 63.10(b)(2)(x)];

39.c.xviii. all adjustments and maintenance performed on CMS [40 CFR 63.10(b)(2)(xi)];

39.c.xix. all required CMS measurements [40 CFR 63.10(c)(1)];

39.c.xx. the date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks [40 CFR 63.10(c)(5)];

39.c.xxi. the nature of the repairs or adjustments to the CMS that was inoperative or out of control [40 CFR 63.10(c)(12)].

40. Applicable Requirement If an excursion occurs that is below the minimum, or above the maximum operating parameter value established in accordance with Condition 38, the permittee may choose to conduct a performance test in accordance with Condition 41 to demonstrate compliance. An operating parameter excursion is considered a violation of the standard if a performance test is not conducted. [40 CFR 63.453(p)]

40.a. If the permittee chooses to conduct a performance test, as soon as practical after the beginning of the monitoring parameter excursion, the following requirements shall be met:

40.a.i. Before the steps in Condition 40.a.ii. are performed, all sampling and measurements necessary to meet the performance test requirements shall be conducted.

40.a.ii. Steps shall be taken to repair or adjust the operation of the process to end the parameter excursion period.

40.a.iii. Steps shall be taken to minimize total HAP emissions to the atmosphere during the parameter excursion period.

40.a.iv. A parameter excursion is not a violation of the applicable emission standard if the results of the performance test conducted in accordance with this condition demonstrates compliance with the standard.

40.a.iv.(1) Conduct a performance test as specified in Condition 41 using the monitoring data specified in Condition 40.a.i. that coincides with the time of the parameter excursion. No maintenance or changes shall be made to the open biological treatment system after the beginning of a parameter excursion that would influence the results of the performance test.

40.a.iv.(2) If the results of the performance test demonstrate compliance with the applicable standard, then the parameter excursion is not a violation of the applicable standard.

40.a.iv.(3) If the results of the performance test do not demonstrate compliance with the applicable standard because the total HAP mass entering the open biological treatment system is below the level needed to demonstrate compliance with the standard, then the permittee shall perform the following comparisons:

40.a.iv.(3)(a) If the value of f_{bio}(MeOH) determined during the performance test is within the range of values established during the initial and subsequent performance tests, then the parameter excursion is not a violation of the applicable standard.

40.a.iv.(3)(b) If the value of f_{bio}(MeOH) determined during the performance test is not within the range of values established during the initial and subsequent performance tests, then the parameter excursion is a violation of the applicable standard.

Performance tests conducted to verify compliance after an operating parameter excursion

41. Monitoring Requirement Performance tests conducted to verify compliance in the event of an operating parameter excursion shall be performed as described below. [OAR 340-218-0050(3)(a) and 40 CFR 63.453(j) and 40 CFR 63.7]

41.a. If unsafe sampling conditions exist, the permittee shall follow the procedure in Condition 41.b. ; otherwise, follow the procedure in Condition 41.c. .

Unsafe sampling conditions procedure

41.b. If a monitoring parameter excursion has occurred and the permittee chooses to conduct a performance test to verify compliance, and a worker would be exposed to dangerous, hazardous, or otherwise unsafe sampling conditions, the permittee shall perform the following:

41.b.i. The procedures in Condition 41.b. shall be performed each day until the dangerous, hazardous or otherwise unsafe conditions have passed; and

41.b.ii. The procedures in Condition 41.c. shall be performed as soon as practical but no later than 24 hours after the conditions have passed that exposed a worker to dangerous, hazardous or otherwise unsafe conditions.

41.b.iii. The permittee must notify the Department no more than 24 hours after the onset of the unsafe conditions. Notification shall include the reason(s) why sampling cannot be safely conducted. Notification may be made by telephone or fax.

41.b.iv. At a minimum, 1 grab sample shall be taken at each sampling point. [40 CFR 63 Subpart S, Appendix E III.G.]

41.b.v. For each sampling day, perform the procedures specified in sections III.E. and F. and IV. of Appendix E of 40 CFR Part 63 Subpart S for nonthoroughly mixed open biological treatment systems. [40 CFR 63.457(l)(3)]

41.b.vi. Perform the relevant procedures specified in III.G. of Appendix E of 40 CFR Part 63 Subpart S. [40 CFR 63.457(l)(3)]

41.b.vii. For each sampling day, perform the mass removal test procedures specified in 40 CFR 63.457(l)(2) for total HAP, and calculate the daily HAP mass removal. [40 CFR 63.457(l)]

41.b.viii. Upon completion of the sampling period, calculate the daily HAP mass removal rate.

45. Monitoring Requirement Beginning on the date listed in Table CV-1, the permittee shall monitor each listed closed-vent system as specified in this Condition. [40 CFR 63.453(k) and OAR 340-218-0050(3)(a)]

45.a. For each closed-vent system, the permittee shall prepare and maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment. [40 CFR 63.454(b)]

Initial and Annual Monitoring

45.b. Initial and Annual Monitoring: The following inspections of enclosures and closed-vent systems are required initially and annually:

45.b.i. For positive pressure closed-vent systems or portions of closed-vent systems, including condensate collection tanks, demonstrate no detectable leaks as specified in Condition 42.c (40 CFR 63.450(c)) measured by the procedures in 40 CFR 63.457(d) or other method approved by EPA.

45.b.ii. Demonstrate that each enclosure opening is maintained at negative pressure as specified in 40 CFR 63.457(e).

45.b.iii. The initial monitoring for the LVHC and bleach plant closed-vent systems shall be performed no later than October 12, 2001.

45.b.iv. The initial monitoring for the HVLC closed-vent system shall be performed no later than October 13, 2006.

Monthly Monitoring

45.c. Monthly Monitoring: The following inspections of enclosures and closed-vent systems listed in Table CV-1 are required at least once each calendar month separated by at least 14 days and at other times as requested by the Department: [40 CFR 63.453(k) and 40 CFR 63.453(l)]

45.c.i. For each enclosure opening, a visual inspection of the closure mechanism specified in Condition 42.b (40 CFR 63.450(b)) shall be performed to ensure the opening is maintained in the closed position and sealed.

45.c.ii. Each closed-vent system shall be visually inspected. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects.

45.c.iii. Bypass line valves that are not computer controlled shall be inspected to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line.

45.d. Recordkeeping For each applicable enclosure opening, closed-vent system, and closed collection system, the owner or operator shall maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment and shall record the following information for each inspection: [OAR 340-218-0050(3)(b) and 40 CFR 63.454(b)]

45.d.i. Date of inspection;

45.d.ii. The equipment type and identification;

45.d.iii. Results of negative pressure tests for enclosures;

45.d.iv. Results of leak detection tests (if applicable, annual requirement only);

45.d.v. The nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection);

45.d.vi. The date the defect or leak was detected and the date of each attempt to repair the defect or leak;

45.d.vii. Repair methods applied in each attempt to repair the defect or leak;

45.d.viii. The reason for the delay if the defect or leak is not repaired within 15 days after discovery;

45.d.ix. The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;

45.d.x. The date of successful repair of the defect or leak; and

45.d.xi. The position and duration of opening of bypass line valves and the condition of any valve seals. The duration of a manual bypass shall be determined from the time the valve seal was broken (or unlocked) to the time a new seal was put in place (or relocked).

Monitoring of Digester System prior to Closed Vent System – State Requirement

46. Applicable Requirement Beginning April 16, 2001, if an inspection required by Condition 47 identifies visible leaks in ductwork, piping, or connections to covers in the digester system and prior to the beginning of the closed vent system, then the following corrective actions shall be taken as soon as practicable. [OAR 340-226-0120]

46.a. A first effort to repair or correct the defect shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.

46.b. The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified. Delay of repair or corrective action is allowed if the repair or corrective action is technically infeasible without a process unit shutdown or if the owner or operator determines that the emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

47. Monitoring Requirement Beginning April 16, 2001, the permittee shall monitor the digester system prior to the beginning of the closed vent system as specified in this Condition. [40 CFR 63.453(k) and OAR 340-218-0050(3)(a)]

47.a. The permittee shall prepare and maintain an inspection plan including a drawing or schematic of the components of the digester system.

47.b. Monthly Monitoring: The digester system shall be visually inspected at least once each calendar month separated by at least 21 days and at other times as requested by the Department. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects.

47.c. Recordkeeping The permittee shall record the following information for each inspection: [OAR 340-218-0050(3)(b)]

47.c.i. Date of inspection;

47.c.ii. The equipment type and identification;

47.c.iii. The nature of the defect or leak;

47.c.iv. The date the defect or leak was detected and the date of each attempt to repair the defect or leak;

47.c.v. Repair methods applied in each attempt to repair the defect or leak;

47.c.vi. The reason for the delay if the defect or leak is not repaired within 15 days after discovery;

47.c.vii. The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;

47.c.viii. The date of successful repair of the defect or leak.

INDIVIDUAL DRAIN SYSTEM REQUIREMENTS

Summary of requirements

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Averaging Time	Testing Condition	Monitoring Condition
40 CFR 63.446(d)(1) and 40 CFR 63.962	48	Individual drain system requirements	See Condition 48	n/a	n/a	50
40 CFR 63.453(k)	49	Individual drain system corrective actions	See Condition 49	n/a	n/a	50

48. Applicable Requirement Beginning April 16, 2001, the permittee shall comply with the following Individual Drain System requirements. [40 CFR 63.446(d)(1) and 40 CFR 63.962]

48.a. The permittee shall control air emissions from the individual drain system used to control emissions from pulping condensates using one or a combination of the following:

48.a.i. Covers, water seals, and other air emission control equipment as specified in paragraph 48.b of this section.

48.a.ii. Hard-piping.

48.a.iii. Venting of the individual drain system through a closed vent system to a control device in accordance with the following requirements:

48.a.iii.(1) The individual drain system is designed and operated such that an internal pressure in the vapor headspace in the system is maintained at a level less than atmospheric pressure when the control device is operating, and

48.a.iii.(2) The closed vent system and control device are designed and operated in accordance with the requirements of Condition 11.c or 13.d (40 CFR 63.443(d)), and Condition 42 (40 CFR 63.450).

48.b. Permittees controlling air emission from an individual drain system in accordance with paragraph 48.a shall meet the following requirements:

48.b.i. The individual drain system shall be designed to segregate the organic vapors from wastewater managed in the controlled individual drain system from entering any other individual drain system that is not controlled for air emissions in accordance with the standards specified in this Condition.

48.b.ii. Drain control requirements. Each drain shall be equipped with either a water seal or a closure device in accordance with the following requirements:

48.b.ii.(1) When a water seal is used, the water seal shall be designed such that either:

48.b.ii.(1)(a) The outlet to the pipe discharging the wastewater extends below the liquid surface in the water seal of the drain; or

48.b.ii.(1)(b) A flexible shield or other device is installed which restricts wind motion across the open space between the outlet of the pipe discharging the wastewater and the drain.

48.b.ii.(2) When an closure device is used (e.g., securing a cap or plug on a drain that is not receiving wastewater), the closure device shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the drain opening and the closure device.

48.b.iii. Junction box control requirements. Each junction box shall be equipped with controls as follows:

48.b.iii.(1) The junction box shall be equipped with a closure device (e.g., manhole cover, access hatch) that is designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, other open spaces in the closure device or between the perimeter of the junction box opening and the closure device.

48.b.iii.(2) If the junction box is vented, the junction box shall be vented in accordance with the following requirements:

48.b.iii.(2)(a) The junction box shall be vented through a closed vent system to a control device except as provided for in paragraph 48.b.iii.(2)(b). The closed vent system and control device shall be designed and operated in accordance with the standards specified in Condition 11.c or 13.d (40 CFR 63.443(d)), and Condition 42 (40 CFR 63.450).

48.b.iii.(2)(b) As an alternative to paragraph 48.b.iii.(2)(a) the permittee may vent the junction box directly to the atmosphere when all of the following conditions are met:

48.b.iii.(2)(b)(1) The junction box is filled and emptied by gravity flow (i.e., there is no pump) or is operated with no more than slight fluctuations in the liquid level. Large changes in the size of the junction box vapor headspace created by using a pump to repeatedly empty and then refill the junction box do not meet this Condition.

48.b.iii.(2)(b)(2) The vent pipe installed on the junction box shall be at least 90 centimeters in length and no greater than 10.2 centimeters in diameter.

48.b.iii.(2)(b)(3) Water seals are installed at the liquid entrance(s) to or exit from the junction box to restrict ventilation in the individual drain system and between components in the individual drain system. The permittee shall demonstrate (e.g., by visual inspection or smoke test) upon request by the Administrator that the junction box water seal is properly designed and restricts ventilation.

48.b.iv. Sewer line control requirements. Each sewer line shall not be open to the atmosphere and shall be covered or closed in a manner such that there are no visible cracks, holes, gaps, or other open spaces in the sewer line joints, seals, or other emission interfaces.

48.b.v. Operating requirements. The permittee shall operate the air emission controls required by paragraphs 48.b.ii, 48.b.ii, and 48.b.iv of this section in accordance with the following requirements:

48.b.v.(1) Each closure device shall be maintained in a closed position whenever wastewater is in the individual drain system except when it is necessary to remove or open the closure device for sampling or removing material in the individual drain system, or for equipment inspection, maintenance, or repair.

48.b.v.(2) Each drain equipped with a water seal and open to the atmosphere shall be operated to ensure that the liquid in the water seal is maintained at the appropriate level. Examples of acceptable means for complying with this provision include but are not limited to using a flow-monitoring device indicating positive flow from a main to a branch water line supplying a trap; continuously dripping water into the trap using a hose; or regular visual observations.

49. Applicable Requirement Beginning April 16, 2001, if an inspection identifies visible defects in the Individual Drain Systems specified in Condition 48, or if an instrument reading of 500 ppm or greater above background is measured, the following corrective actions shall be taken: [40 CFR 63.453(l) and 40 CFR 63.964(b)]

49.a. (1) The permittee shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but not later than 15 calendar days after detection except as provided in paragraph (b)(2) of this Condition.

49.b. Repair of a defect may be delayed beyond 15 calendar days if the permittee determines that repair of the defect requires emptying or temporary removal from service of the individual drain system and no alternative capacity is available at the facility site to accept the wastewater normally managed in the individual drain system. In this case, the permittee shall repair the defect at the next time the process or unit that is generating the wastewater managed in individual drain system stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

50. Monitoring Requirement Beginning April 16, 2001, the permittee shall inspect the individual drain system used to comply with Condition 34.c. at least once each calendar month separated by at least 14 days and in accordance with the following requirements: [40 CFR 63.453(l), 40 CFR 63.964(a) and OAR 340-218-0050(3)(a)]

50.a. The individual drain system shall be visually inspected as follows to check for defects that could result in air emissions to the atmosphere.

50.a.i. Visually inspect each drain as follows:

50.a.i.(1) When the drain is using a water seal to control air emissions, the permittee shall verify appropriate liquid levels are being maintained and identify any other defects that could reduce water seal control effectiveness.

50.a.i.(2) When the drain is using a closure device to control air emissions, the permittee shall visually inspect each drain to verify that the closure device is in place and there are no defects. Defects include, but are not limited to, visible cracks, holes, or gaps in the closure devices; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing plugs, caps, or other closure devices.

50.a.ii. The permittee shall visually inspect each junction box to verify that closure devices are in place and there are no defects. Defects include, but are not limited to, visible cracks, holes, or gaps in the closure devices; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

50.a.iii. The permittee shall visually inspect the unburied portion of each sewer line to verify that all closure devices are in place and there are no defects. Defects include, but are not limited to, visible cracks, holes, gaps, or other open spaces in the sewer line joints, seals, or other emission interfaces.

50.a.iv. In the event that a defect is detected, the permittee shall repair the defect in accordance with Condition 49.

(Note: Monitoring of condensate collection tanks is addressed in Condition 45.b).

50.b. Recordkeeping For each applicable enclosure opening, closed-vent system, and closed collection system, the owner or operator shall maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment and shall record the following information for each inspection: [40 CFR 63.453(l) and 40 CFR 63.454(b) and OAR 340-218-0050(3)(b)]

50.b.i. Date of inspection;

50.b.ii. The equipment type and identification;

50.b.iii. The nature of the defect or leak and the method of detection;

50.b.iv. The date the defect or leak was detected and the date of each attempt to repair the defect or leak;

50.b.v. Repair methods applied in each attempt to repair the defect or leak;

50.b.vi. The reason for the delay if the defect or leak is not repaired within 15 days after discovery;

50.b.vii. The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;

50.b.viii. The date of successful repair of the defect or leak; and

50.b.ix. The position and duration of opening of bypass line valves and the condition of any valve seals. The duration of a manual bypass shall be determined from the time the valve seal was broken (or unlocked) to the time a new seal was put in place (or relocked).

SOURCE TESTING & EMISSION FACTOR VERIFICATION PROCEDURE

51. SOURCE TESTING AND EMISSION FACTOR VERIFICATION PROCEDURE If source testing and/or emission factor verification is required, the permittee shall use the following procedures, unless otherwise specified in this permit or approved in writing by the Department:

51.a. Pretest notification and test plan submittal:

51.a.i. In the case of initial performance tests (also referred to as initial performance (source) tests), the permittee shall notify the Department at least 60 days prior to the initial performance test by submitting a source test plan in accordance with the Department's Source Sampling Manual [40 CFR 63.7(b)(1)] ; otherwise

51.a.ii. In the case of source tests and emission factor verification tests (other than initial performance tests), the permittee shall notify the Department at least 15 days prior to conducting any source tests or emission factor verification tests by submitting a source test plan in accordance with the Department's Source Sampling Manual.

51.b. Submittal of test results:

51.b.i. The permittee shall submit a summary of all initial performance tests to the Department within 60 days. The source test is considered complete upon completion of all sampling. The summary shall include the following information: [40 CFR 63.10(d)(2)]

51.b.i.(1) Emissions unit and monitoring point identification;
51.b.i.(2) Emission results in units that are consistent with the emissions limits on the emissions unit(s) being tested (e.g., gr/dscf, lb/hour, lb per unit throughput, etc.);
51.b.i.(3) Process parameters during the test (e.g., material throughput, types and amounts of fuels used, heat input, etc.); and
51.b.i.(4) Control device operating parameters, if applicable.

51.b.ii. The permittee shall submit a summary of all source tests and emission factor verification tests (other than initial performance tests) to the Department within 45 days of any test. The source test is considered complete upon receipt of all sample results. The summary shall include the following information:

51.b.ii.(1) Emissions unit and monitoring point identification;
51.b.ii.(2) Emission results in units that are consistent with the emissions limits on the emissions unit(s) being tested (e.g., gr/dscf, lb/hour, lb per unit throughput, etc.);
51.b.ii.(3) Process parameters during the test (e.g., material throughput, types and amounts of fuels used, heat input, etc.); and
51.b.ii.(4) Control device operating parameters, if applicable.

51.c. The permittee shall conduct all testing in accordance with the Department's Source Sampling Manual unless otherwise approved by the Department. [OAR 340-212-0120]

51.d. Only regular operating staff may adjust the processes or emission control device parameters during a compliance source test and within two (2) hours prior to the tests. Any operating adjustments made during a compliance source test, which are a result of consultation during the tests with source testing personnel, equipment vendors, or consultants, may render the source test invalid.

51.e. For the purpose of establishing or revising operating parameter ranges, the following are allowed:

51.e.i. The permittee may perform pretest runs at any time prior to the compliance source test or emission factor verification test, subject to the following conditions:

51.e.i.(1) Pretest run results are intended only to help predetermine operating parameter values to be used during the actual compliance source testing or emission factor verification testing, but may not be used themselves to establish operating parameter ranges required elsewhere in this permit;

51.e.i.(2) Pretest runs may be of any duration;

51.e.i.(3) Pretest run results may not be used as part of the compliance demonstration or emission factor verification;

51.e.i.(4) Pretest runs must be completed prior to beginning the compliance source testing or emission factor verification testing, and no pretest runs may be conducted between individual compliance source test or emission factor verification test runs.

51.e.ii. The permittee may operate outside the applicable parameter range(s) during pretest runs and during the compliance source test or emission factor verification test for the purpose of revising or expanded the allowed operating parameter ranges.

51.e.iii. This condition does not authorize non-compliance with any applicable standard or limitation. Noncompliance with an applicable standard or limitation that occurs as a result of operation outside established operating parameter range(s) must be reported as an excess emission.

51.f. All compliance source tests shall be performed at 90 to 110 percent of the normal maximum operating rate. For purposes of this permit, the normal maximum operating rate is defined as the 90th percentile of the average daily operating rates during a 12 month period immediately preceding the source test.

51.g. Each source test shall consist of at least three (3) test runs and the emissions results shall be reported as the arithmetic average of all valid test runs. For a source test to be accepted, there must be at least two valid test runs.

CONDENSATE EMISSION FACTOR VERIFICATION – CALCULATING 'd'

52. The permittee shall use the following procedure to determine the value of 'd'.

52.a. Using the sample results from each liquid stream during the Initial Condensate Characterization Study (ICCS) or most recent ICCS procedure, calculate the averages and standard deviations of the samples taken as indicated in the table below.

Values determined for ICCS procedure:

Stream	No. of Samples	Sample results, lb/gal or lb/hr or lb/ton	Average MeOH Content, lb/gal or lb/hr or lb/ton	Standard Deviation, lb/gal or lb/hr or lb/ton
A	n_I	xa_1, xa_2, xa_3,...	a_I	S_{aI}
B	n_I	xb_1, xb_2, xb_3,...	b_I	S_{bI}
...	...	...	...	...
M	n_I	xm_1, xm_2, xm_3,...	m_I	S_{mI}

Nomenclature:

- the subscript Roman numeral I refers to data from the most recent ICCS procedure;
- streams are identified as stream A, stream B,..., stream M;
- m is the number of named streams sampled;
- n_1 is the number of samples taken;
- xa_1, xa_2, etc. are the individual sample results for stream A; xb_1, xb_2, etc. are the individual sample results for stream B, etc.;
- a_1 is the average of the sample results for stream A; b_1 is the average of the sample results for stream B, etc.;
- S_{a1} is the standard deviation of the sample results for stream A; S_{b1} is the standard deviation of the sample results for stream B, etc.

Calculations:

The average of the samples for stream A is calculated as (others similar):

$$a_I = \frac{xa_1 + xa_2 + ... + xa_n}{n_I}$$

The standard deviation of the samples for stream A is calculated as (others similar):

$$S_{aI} = \sqrt{\frac{(xa_1 - a_I)^2 + (xa_2 - a_I)^2 + \ldots + (xa_n - a_I)^2}{n_I - 1}}$$

52.b. Calculate the standard deviation of the mixture for the samples collected during the ICCS or most recent ICCS retest as follows:

$$S_{mix} = \sqrt{(S_{aI})^2 + (S_{bI})^2 + (S_{cI})^2 \ldots + (S_{mI})^2}$$

52.c. Calculate the standard deviation of the n_1-day averages (S_{avg}) of the methanol content of the mixture during the most recent ICCS procedure as follows:

$$S_{avg} = \frac{S_{mix}}{\sqrt{P}}$$

where P is the condensate collection averaging period.

52.d. Calculate the average amount of methanol collected per day (total of all named streams) during the previous calendar year, in lb methanol/ODTP, as determined from daily monitoring of the named streams. The average methanol collected per day is denoted by Y.

52.e. Select the amount of methanol that must be collected (Z) that applies to the facility, as follows:

Z = 7.2 lb/ODTP for an unbleached kraft pulp mill; or

Z = 11.1 lb/ODTP for a bleached kraft pulp mill.

52.f. Calculate the value of 'd' as follows:

$$d = \frac{(Y - Z)}{S_{avg}}$$

CONDENSATE EMISSION FACTOR VERIFICATION PROCEDURE

53. The permittee shall use the following procedure for Emission Factor (EF) verification:

Note on the general procedure: If the average methanol content of each stream during the EF verification test is greater than the current EF, the EF is considered verified. Otherwise, conduct a one-sided t-test to determine whether or not the average methanol content of each stream during the EF verification test is significantly less than the data collected during the most recent ICCS procedure.

53.a. For each stream, calculate the average of the samples taken, and compare the averages to the current EF's.

53.a.i. If the average is greater than or equal to the current EF, then the EF is verified and the remaining calculations in this Condition are not required for that stream.

53.a.ii. If the average is less than the EF, then perform the calculations specified in the remainder of this Condition.

53.b. Calculate the standard deviation of the samples taken as indicated in the table below:

Values determined for EF verification:

Stream	No. of Samples	Sample results, lb/gal or lb/hr or lb/ton	Average MeOH Content, lb/gal or lb/hr or lb/ton	Standard Deviation, lb/gal or lb/hr or lb/ton
A	n_{II}	ya_1, ya_2, ya_3,...	a_{II}	S_{aII}
B	n_{II}	yb_1, yb_2, yb_3,...	b_{II}	S_{bII}
...	...	...	...	...
M	n_{II}	ym_1, ym_2, ym_3,...	m_{II}	S_{mII}

Nomenclature:

- the subscript Roman numeral II refers to data from the most recent verification testing procedure;
- named streams are identified as stream A, stream B,..., stream M;
- m is the number of named streams sampled;
- n_{II} is the number of samples taken;
- ya_1, ya_2, etc. are the individual sample results for stream A; yb_1, yb_2, etc. are the individual sample results for stream B (and so on);
- a_{II} is the average of the sample results for stream A; b_{II} is the average of the sample results for stream B, etc.;
- S_{aII} is the standard deviation of the sample results for stream A; S_{bII} is the standard deviation of the sample results for stream B, etc.

Calculations:

The average of the samples for stream A is calculated as (others similar):

$$a_{II} = \frac{ya_1 + ya_2 + ... + ya_n}{n_{II}}$$

The standard deviation of the samples for stream A is calculated as (others similar):

$$S_{aII} = \sqrt{\frac{(ya_1 - a_{II})^2 + (ya_2 - a_{II})^2 + ... + (xa_n - a_{II})^2}{n_{II} - 1}}$$

53.c. Calculate the pooled standard deviation for each stream as follows:

Pooled standard deviation for stream A : $S_a = \sqrt{\frac{(n_I - 1)(S_{aI})^2 + (n_{II} - 1)(S_{aII})^2}{(n_I + n_{II} - 2)}}$

(Note: SaI is determined in Condition 52.)

...

Pooled standard deviation for stream M : $S_m = \sqrt{\frac{(n_I - 1)(S_{mI})^2 + (n_{II} - 1)(S_{mII})^2}{(n_I + n_{II} - 2)}}$

(Note: n_I and S_{aI} , ... , S_{mI} are defined in Condition 52).

53.d. Calculate the "t" statistic for each stream as follows:

$$t_a = \frac{(a_I - a_{II})}{S_a\sqrt{\frac{1}{n_I} + \frac{1}{n_{II}}}}$$

...

$$t_m = \frac{(m_I - m_{II})}{S_c\sqrt{\frac{1}{n_I} + \frac{1}{n_{II}}}}$$

53.e. Calculate the degrees of freedom (df), as follows:

$$df = (n_I + n_{II} - 2)$$

53.f. Select $t_{0.05}$ from the table below* for the number of degrees of freedom calculated above.

df	$t_{0.05}$	df	$t_{0.05}$	df	$t_{0.05}$	df	$t_{0.05}$
5	2.015	16	1.746	27	1.703	38	1.687
6	1.943	17	1.740	28	1.701	39	1.685
7	1.895	18	1.734	29	1.699	40	1.684
8	1.860	19	1.729	30	1.697	41	1.683
9	1.833	20	1.725	31	1.696	42	1.683
10	1.812	21	1.721	32	1.694	43	1.682
11	1.796	22	1.717	33	1.693	44	1.681
12	1.782	23	1.714	34	1.692	45	1.681
13	1.771	24	1.711	35	1.690	46	1.680
14	1.761	25	1.708	36	1.689	47	1.679
15	1.753	26	1.706	37	1.688	48	1.679

* Note: $t_{0.05}$ is the t-value for a one-tailed test at the 95 percent confidence interval for the selected degrees of freedom (df). If t-values are required for degrees of freedom not listed in this table, values shall be obtained from any statistical methods text or reference book.

53.g. Compare the t-values for each stream (t_a, t_b, ... , t_m) to $t_{0.05}$.

If the t-value for a stream is less than or equal to $t_{0.05}$, the EF for that stream is verified.

If the t-value for a stream is greater than $t_{0.05}$, the EF for that stream is not verified.

END OF SECTION

ALL INQUIRIES SHOULD BE DIRECTED TO:
Department of Environmental Quality
Northwest Region
2020 S.W. Fourth Avenue, Suite 400
Portland, Oregon 97201-4987
Telephone: (503) 229-5263

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EJD:GFD October, 2000

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
OREGON TITLE V OPERATING PERMIT REVIEW REPORT

for

Fort James Operating Company
Wauna Mill
92326 Taylorville Road
Clatskanie, OR 97016

Northwest Region
2020 S.W. Fourth Avenue, Suite 400
Portland, OR 97201

PSEL	SOURCE			AMB	COMPL	SPEC	REPORT				EXCESS					SIZE	
CRED	TEST	COMS	CEMS	MON	SCHED	COND	A	S	Q	M	R	N	NSPS	NSR	PSD		TV
	Y	Y	Y				Y	Y		Y	Y		Y		Y		Y

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LIST OF ABBREVIATIONS USED IN THIS REVIEW REPORT

AMB	Ambient
AQMA	Air quality management area
ASTM	American Society of Testing and Materials
BDT	Bone dry ton
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon monoxide
COMPL	Compliance
COMS	Continuous opacity monitoring system
COND	Condition
CRED	Credit
DEQ	Oregon Department of Environmental Quality
dscf	dry standard cubic feet
EF	Emission factor
EPA	United State Environmental Protection Agency
EU	Emissions unit
FCAA	Federal Clean Air Act
gr/dscf	grains per dry standard cubic feet
HAP	Hazardous air pollutant
HVLC	High-Volume Low Concentration, refers to gases or equipment systems producing these gases
LVHC	Low-Volume High Concentration, refers to gases or equipment systems producing these gases
ID	Identification code
I&M	Inspection and maintenance
MB	Material balance
Mlb	1000 pounds
MON	Monitoring
NA	Not applicable
NESHAP	National emission standard for hazardous air pollutants
NO_x	Oxides of nitrogen
NSPS	New source performance standard
NSR	New source review
O_2	Oxygen
OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
O&M	Operation and maintenance
Pb	Lead
PCD	Pollution Control Device
PM	Particulate matter
PM_{10}	Particulate matter less than 10 microns in size
PSD	Prevention of significant deterioration
PSEL	Plant Site Emission Limit
SCHED	Schedule
SPEC	Special
SO_2	Sulfur dioxide
ST	Source test
VE	Visible emissions
VMT	Vehicle mile traveled
VOC	Volatile organic compound

TERMINOLOGY USED IN THIS REPORT

- The terms "NESHAP", "MACT" and "MACT Standard" are used interchangeably in this report. In general they all refer to a National Emission Standard for Hazardous Air Pollutants (NESHAP) promulgated by the U.S. Environmental Protection Agency (EPA). NESHAPs require the affected facilities to meet Maximum Achievable Control Technology (MACT) standards.
- NESHAPs are set forth in the Code of Federal Regulations, 40 CFR Part 63.
- The NESHAP for the Pulp and Paper Industry (also referred to as the Pulp and Paper MACT) is set forth in 40 CFR Part 63, Subpart S.
- "Part 63" is used in this report to refer to 40 CFR Part 63.
- "Subpart S" is used in this report to refer to 40 CFR Part 63, Subpart S.
- "Subpart A" is used in this report to refer to 40 CFR Part 63, Subpart A, the NESHAP General Provisions.

PROPOSED ACTION

1. The Department proposes to renew the Title V permit for the Fort James Operating Company Wauna mill. In addition to renewing the permit, the following will be incorporated into the permit: the provisions of a Prevention of Significant Deterioration permit; the provisions of the National Emission Standards for Hazardous Air Pollutants for the Pulp and Paper Industry; applicable requirements related to the operation of gas turbine generators and/or diesel generators; and all changes that were made to the permit during the previous permit term.

PERMITTEE IDENTIFICATION AND FACILITY DESCRIPTION

2. The Wauna mill is a large, integrated facility which produces pulp using the Kraft and refiner-mechanical pulping processes. A variety of consumer products such as paper towels, facial and toilet tissue, and communications paper products are produced on five paper machines.

3. The basic processes employed at the mill are briefly described below.

   3.a. Chip receiving and storage Wood chips and/or sawdust are received by truck, railcar or barge and are stored in large outdoor piles.

   3.b. Pulping process Wood chips and/or sawdust are converted into pulp in a process called digestion. Wood chips and pulping chemicals called white liquor are mixed and heated in large pressurized vessels called digesters. Digestion dissolves the wood lignins that bind the wood fibers together. After digestion, the fiber, which is brown at this point, is separated from the dissolved lignins, spent pulping chemicals and undissolved chips or knots in a series of cleaning devices called knotters, deckers and brownstock washers.

3.c. Chemical recovery processes The mixture of spent pulping chemicals and lignins from the digestion process, known as black liquor, is processed to recover and recycle pulping chemicals and to produce energy. The black liquor, which initially contains a high percentage of water and is called weak black liquor, is first concentrated in a set of evaporators. Water is evaporated from the black liquor to produce heavy black liquor, which is approximately 60-70 percent solids. Heavy black liquor is combustible, and is the primary fuel used in the recovery furnace. The heat from combustion of black liquor is used to make steam for use in the mill, while the pulping chemicals form a molten sodium sulfate salt, called smelt, which collects in the bottom of the recovery furnace and flows into a smelt dissolving tank. The smelt solution is called green liquor. The green liquor is treated by the addition of quicklime (calcium oxide), which results in the formation of white liquor, which can be reused in the digestion process. A precipitate also forms, called lime mud; lime mud is heated in a lime kiln to convert it back to quicklime, which is then reused.

3.d. Bleaching process The washed pulp can be used directly to make brown paper products, such as grocery bags or cardboard, or it can be bleached to whiten the pulp for production of white paper products such as office paper or tissue and towel products. The bleaching system, or bleach plant, consists of several stages in which bleaching is done using chlorine dioxide, sodium hydroxide and/or hydrogen peroxide or mixtures of these. Formerly, chlorine and sodium hypochlorite were also used for bleaching. Oxygen delignification may also be used in the bleach plant.

3.e. Paper machines The washed and bleached pulp is mixed with additional water and additives and then sent to paper machines for production of paper products.

PERMIT HISTORY

4. The Title V permit for the Wauna mill was issued to James River Paper Company on January 2, 1996.

5. Permit Addendum Number 1 was issued on October 8, 1997. The addendum was for a name change from James River Paper Company to Fort James Operating Company. In 1997, James River and Fort Howard paper companies merged to form Fort James.

6. Permit Addendum Number 2 was issued on September 8, 1998. Two conditions that were considered unnecessary were deleted, and the monitoring method for emissions units EU37 and EU38 was changed from Method 8 to DEQ Method 5.

7. Permit Addendum Number 3 was issued in 1999. This addendum incorporated the requirements of the National Emission Standards for Hazardous Air Pollutants from the Printing and Publishing Industry, 40 CFR 63 Subpart KK, into the permit.

8. Permit Addendum Number 4 was issued on December 9, 1999. This addendum revised the baseline emission rate for carbon monoxide (CO).

9. In addition to the above revisions to the Title V permit, a Prevention of Significant Deterioration (PSD) permit, number 04-0003, was issued to Fort James on November 6, 2000. The PSD permit authorizes construction of a new paper machine at the Wauna mill and also authorizes an increase in the Plant Site Emission Limit for nitrogen oxides (NOx).

10. In 2000, Fort James Operating Company was purchased by Georgia Pacific Corporation. However, the legal name is still Fort James Operating Company.

ENFORCEMENT DURING LAST PERMIT PERIOD

11. Condition 42 of the mill's Title V Operating Permit was violated in January, 1996. Condition 42 requires that emission unit EU34 (the package boiler) be operated with a minimum of 4 percent excess oxygen in order to minimize carbon monoxide emissions. Records for January, 1996, indicated that the package boiler was operated at less than 4% excess oxygen on several occasions. This was a Class II violation and a Notice of Noncompliance was issued.

12. The semi-annual compliance reports for 1996 and 1997, as well as additional information provided by the mill in a letter dated March 15, 1997, indicated that a number of permit deviations had occurred in those years. After reviewing the reports and letter, DEQ concluded that many of the reported deviations were unavoidable, and/or otherwise met the requirements of Oregon Administrative Rule (OAR) 340-028-1450 (Excess emissions). However, a number of reported deviations did not appear to meet the requirements of OAR 340-028-1450, and were considered to be Class I or Class II violations. The Department assessed a civil penalty for these violations.

13. The semi-annual compliance report submitted on July 31, 1998, indicated that the chlorine dioxide flow to the brown stock washer hood vents was interrupted in February when the bleach plant heat exchanger was taken off line for repairs. Permit Condition 32 requires the permittee to take corrective action if the chlorine dioxide flow to the brown stock washer hood vent goes outside the range of 1.15 to 1.35 gallons per minute. Although Fort James took corrective action upon discovering the problem, the Department's view was that interruption of the chlorine dioxide flow was preventable and therefore is not subject to the Excess Emission Rules, Oregon Administrative Rules 340-028-1400 through 1450. A Notice of Noncompliance was issued.

14. The semi-annual compliance report submitted on July 28, 1999, indicated two violations of the permit occurred. On March 25, 1999, the Smelt Dissolving Tank Vent (SDTV) was source tested for Particulate Matter (PM) and Total Reduced Sulfur (TRS) emissions. During the source test, both PM and TRS emissions exceeded the permit limits. These were repeat Class II violations and a civil penalty was assessed.

15. On January 21, 2000, visible emissions from the recovery furnace exceeded 35 percent for more than 60 minutes. This was a violation of permit condition 16, which states that recovery furnace visible emissions may not exceed 35% opacity for a period or periods aggregating more than thirty (30) minutes in any one hundred eighty (180) consecutive minutes or more than sixty (60) minutes in any twenty-four (24) consecutive hours. Also, on June 13, 1999, the Smelt Dissolving Tank Vent (SDTV) was source tested for Particulate Matter (PM) and Total Reduced Sulfur (TRS) emissions. During the source test, TRS emissions exceeded the permit limits. These were Class II violations. In addition, the SDTV TRS violation was a repeat violation for which civil penalties were previously assessed. A Mutual Agreement and Order (MAO) was issued, which included a civil penalty for the SDTV violation.

16. On March 25, 2001, the Department received an excess emission report from the Wauna mill which indicated that NCGs had been vented to atmosphere for approximately 9 ½ hours as a result of operator error. This was a Class I violation and a civil penalty was assessed.

SUMMARY OF MAJOR CHANGES TO THE PERMIT

17. The Department has made the following major changes to the permit:

17.a. The Plant Site Emission Limits (PSEL) have been changed as follows:

17.a.i. In accordance with the Department's new rules, the short term PSELs have been deleted.

17.a.ii. In accordance with the Department's new rules, the PSELs have been changed from a calendar year basis to a rolling 12 month basis.

17.a.iii. The NOx PSEL has been increased from 1630 to 2167 tons per year, as approved in Prevention of Significant Deterioration (PSD) permit number 04-0003.

17.b. The permit requirements related to the Fluid Bed Boiler have been revised to correct a past permitting error. This is described in more detail below (page 7).

17.c. The requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for the Pulp and Paper Industry (40 CFR Part 63, Subpart S) have been included in the permit. This is described in more detail below (page 9).

17.d. The provisions of Prevention of Significant Deterioration (PSD) permit number 04-0003 have been incorporated into the permit (page 27).

17.e. Permit conditions related to the operation of gas turbine powered electrical generators have been added to the permit (page 28).

17.f. Permit conditions related to the operation of diesel engine powered electrical generators have been added to the permit (page 28).

17.g. The permit has been reformatted. The previous permit format had all applicable requirements grouped together, followed by all monitoring requirements. The new format places the monitoring requirements immediately after the applicable requirements.

17.h. The Plant Site Emission Limit for TRS (Total Reduced Sulfur) has been increased. The permittee discovered that 2 emissions units (Black Liquor Oxidation Systems) had been omitted from the Baseline Emission Rate calculation, and requested that these units be included. Including these units increased the Baseline Emission Rate of TRS from 52 to 78 tons per year. The current Plant Site Emission Limit was also increased to reflect this correction, and is now 78 tons per year.

CORRECTIONS TO THE FLUID BED BOILER REQUIREMENTS

18. When the Fluid Bed Boiler (FBB) was first permitted, the Department erroneously classified it as an incinerator and applied rules which apply to incinerators. An incinerator is defined as a structure or furnace in which combustion takes place, the primary purpose of which is the reduction in volume and weight of unwanted material. The FBB is not used for this purpose and does not meet the definition of incinerator; it is correctly classified as a waste-wood boiler.

19. There are a number of specific rules that apply to incinerators, as well as a requirement to perform a Best Available Control Technology (BACT) analysis and establish BACT emissions limits. Since the FBB is not an incinerator, these rules and requirements do not apply to the FBB. Therefore, the Department has removed or revised the conditions that were based on the incinerator rules. Specific changes are summarized below; the condition numbers refer to the previous permit.

19.a. Condition 46 was based both on the incinerator rules and the New Source Performance Standard (NSPS) for boilers and set a particulate matter limit of 0.10 pounds per million BTU. This condition has been retained, but now only cites the NSPS as the underlying authority.

19.b. Condition 48 was based on the incinerator rules and set an opacity limit of 10 percent. This condition has been changed from a limit to an Emission Action Level (EAL). Exceedance of an EAL is not a violation, but the permittee is required to take action to bring emissions back below the EAL.

19.c. Condition 51 was based on the incinerator rules and set a hydrogen chloride limit of 50 parts per million. This condition has been eliminated.

19.d. Condition 52 was based on the incinerator rules and set a sulfur dioxide limit of 50 parts per million. This condition has been changed from a limit to an Emission Action Level (EAL).

Exceedance of an EAL is not a violation, but the permittee is required to take action to bring emissions back below the EAL.

19.e. Condition 53 was based on the incinerator rules and set a carbon monoxide limit of 50 parts per million. This condition has been changed from a limit to an Emission Action Level (EAL). Exceedance of an EAL is not a violation, but the permittee is required to take action to bring emissions back below the EAL.

19.f. Condition 54 was based on the incinerator rules and set a nitrogen oxide limit of 175 parts per million. This condition has been changed from a limit to an Emission Action Level (EAL). Exceedance of an EAL is not a violation, but the permittee is required to take action to bring emissions back below the EAL.

19.g. Condition 55 was based on the incinerator rules and required that combustion gases be maintained at a minimum of 1,800 degrees F for at least 1 second. This condition has been changed from a limit to an Emission Action Level (EAL). Exceedance of an EAL is not a violation, but the permittee is required to take action to bring emissions back below the EAL.

19.h. Condition 56 was based on the incinerator rules and required the use of automatically operated auxiliary burners. This condition has been eliminated.

19.i. Condition 57 was based on the incinerator rules and required the use of an interlock system. This condition has been eliminated.

19.j. Condition 58 was based on the incinerator rules and required that exhaust gas temperature of less than or equal to 350 degrees F. This condition has been eliminated.

19.k. Condition 59 was based on the incinerator rules and required a minimum combustion efficiency of 99.9 percent. This condition has been changed from a limit to an Emission Action Level (EAL). Exceedance of an EAL is not a violation, but the permittee is required to take action to bring emissions back below the EAL.

19.l. Condition 60 was based on the incinerator rules and required specific training for the FBB operators. This condition has been eliminated.

19.m. Condition 61 was an EAL for opacity. This condition is now redundant and has been eliminated.

19.n. Condition 62 was an EAL for sulfur dioxide. This condition is now redundant and has been eliminated.

19.o. Condition 63 was an EAL for carbon monoxide. This condition is now redundant and has been eliminated.

19.p. Condition 64 was an EAL for nitrogen oxides. This condition is now redundant and has been eliminated.

19.q. Condition 65 was based on the incinerator rules and set a beryllium emission limit of 10 grams per 24 hour period. This condition has been eliminated.

19.r. Condition 66 was based on 40 CFR 61.52, the NESHAP for mercury, and set a mercury emission limit of 3,200 grams per 24 hour period. This rule is not applicable because it applies to facilities that incinerate or dry wastewater treatment plant sludge. The FBB is neither a sludge dryer nor incinerator. Further, there is no mercury used in the pulp and paper making process. This condition has been eliminated.

NESHAP REQUIREMENTS, 40 CFR PART 63, SUBPART S

20. On April 15, 1998, the U.S. Environmental Protection Agency (EPA) promulgated the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Pulp and Paper Industry, 40 CFR Part 63, Subpart S. The Department proposes to modify the Title V permits for affected pulp and paper mills in Oregon to include the Subpart S NESHAP requirements.

21. There are six pulp and paper mills in Oregon that are subject to Subpart S. One mill, the Weyerhaeuser mill in Lane County, lies within the permitting jurisdiction of the Lane Regional Air Pollution Authority (LRAPA); the Oregon Department of Environmental Quality has permitting jurisdiction for the other mills. This review report is for the Fort James pulp and paper mill located at Wauna, near Clatskanie, Oregon.

22. In accordance with OAR 340-028-2200(1)(f), this review report is intended to provide the legal and factual basis for the draft permit conditions. In most cases, the legal basis for a permit condition is included in the permit by citing the applicable regulation. In addition, the factual basis for the requirement may be the same as the legal basis. However, when the regulation is not specific and only provides general requirements, this review report is used to provide a more thorough explanation of the factual basis for the draft permit conditions.

OTHER APPLICABLE PART 63 RULES

23. A facility that is subject to a Part 63 NESHAP is also subject to the NESHAP General Provisions in 40 CFR Part 63, Subpart A. In addition, Subpart S incorporates portions of the National Emission Standards for Individual Drain Systems in 40 CFR Part 63, Subpart RR. These rules are discussed in more detail below.

OVERVIEW OF SUBPART S REQUIREMENTS

24. Subpart S establishes Maximum Achievable Control Technology (MACT) standards that apply to certain processes in pulp mills. These standards were established to reduce the emissions of Hazardous Air Pollutants (HAPs) from certain processes. The requirements and HAPs of concern are briefly described below:

LVHC and HVLC gases

24.a. The pulping process produces gaseous air pollutant emissions that fall into two categories. One category includes a relatively lower volume of gases that contain a relatively high concentration of air pollutants, and are known as Low Volume High Concentration (LVHC) gases. LVHC gases are produced in the digestion process. The other category includes a relatively higher volume of gases that contain a relatively low concentration of air pollutants, and are known as High Volume Low Concentration (HVLC) gases. HVLC gases originate from the brownstock washers, knotters and deckers.

24.b. Subpart S requires that both LVHC and HVLC gases be captured and transported to a device where the gases must be treated by thermal oxidation (burning) in a combustion process such as a boiler, recovery boiler, or lime kiln, or in a dedicated thermal oxidizer (incinerator). The control requirements for the LVHC gases became effective on April 16, 2001. The control requirements for the HVLC gases become effective on April 17, 2006.

24.c. Oregon kraft mills are already required to capture and treat much of the LVHC and HVLC gases. Subpart S requires capture and treatment of additional HVLC gases, and imposes additional requirements on the systems used to capture and transport the LVHC and HVLC gases to the control device(s). In Oregon mills, a thermal oxidizer is used as a back-up control device; a boiler, recovery boiler or lime kiln is the primary control device.

Bleaching system

24.d. The bleaching system produces gaseous air pollutant emissions of primary concern are chlorine and chloroform. Chloroform is a by-product of certain chemical reactions that occur in the bleaching process when chlorine is used. Chlorine is emitted from bleaching stages where chlorine or chlorine dioxide are used.

24.e. Subpart S requires that emissions from bleaching stages where chlorinated bleaching chemicals are used be captured and transported to a scrubber to control chlorine emissions. Subpart S establishes chlorine emission limitations, and also imposes requirements on the emission capture and transport systems.

24.f. Subpart S requires reduction of chloroform emissions by either meeting the wastewater treatment limitations set forth in 40 CFR Part 430, or by eliminating the use of chlorine or hypochlorite in the bleaching system.

24.g. Oregon mills that have bleaching systems generally already use scrubbers to control chlorine emissions; however, in some cases the scrubbers have been upgraded. Oregon bleach mills have also elected to comply with the chloroform limitations by eliminating the use of chlorine and hypochlorite.

Pulping system condensates

24.h. A number of liquid wastewater streams are produced in both the pulping process and in the black liquor evaporation process. These streams are the result of condensing steam and other emissions from the processes, and are known as pulping condensates. These condensate streams contain HAPs (mostly methanol) that can be emitted by evaporating into the atmosphere.

24.i. Subpart S requires that a specified minimum amount of the HAPs in the condensate streams be captured and treated to destroy the HAPs. Treatment of the HAPs can be accomplished either by use of a steam stripper to remove the HAPs from the condensates, after which the HAPs must be destroyed by thermal oxidation; or by transporting the HAPs to a biological wastewater treatment system, where the HAPs are destroyed by biodegradation.

24.j. Two mills in Oregon already have, or are constructing, steam strippers. The remaining mills, including the Wauna mill, wish to treat the condensate HAPs in wastewater treatment systems. However, as currently written, Subpart S imposes requirements for biological treatment systems that are difficult or impossible to meet. EPA is considering changes to the rules to revise these requirements, but such revisions have not yet been promulgated. As result of this situation, mills that want to use biological treatment have requested a compliance extension. In the meantime, the condensate HAPs are (as they have been for decades) being treated in the mill's existing biological treatment systems. The Department believes that the condensate HAPs are already receiving treatment that largely (though not fully) meets the requirements of Subpart S.

HAPs of concern

24.k. The major HAP of concern in the LVHC and HVLC gases, as well as the pulping condensates, is methanol. Other HAPs are present in lesser quantities; however, in most cases, it is only necessary to monitor methanol to show compliance with Subpart S requirements. The exception is that four HAPs (methanol, acetaldehyde, methyl ethyl ketone and propionaldehyde) must be monitored in some cases to show compliance with the condensate treatment requirements. The HAPs of concern in the bleaching system emissions are chlorine and chloroform. Where bleach plant emissions monitoring is required, only chlorine must be monitored. Monitoring of chloroform emissions is not required.

DISCUSSION OF SUBPART S REQUIREMENTS (INCLUDING PORTIONS OF SUBPART RR)

25. This section of the report describes the applicable requirements of Subpart S section-by-section. Where necessary, additional discussion is provided on how these requirements are being implemented in the proposed permit. The descriptions below are in summary form and do not contain the full text of each section; for the full text, see the relevant section of Subpart S. The Subpart S applicable requirements are 40 CFR 63.440 through 63.459.

Description of rules

26. Section 63.440 specifies which facilities Subpart S applies to. Subpart S applies to all kraft mills in the State of Oregon. This section also sets forth the dates by which compliance must be achieved with the standards in Subpart S. Affected mills must achieve compliance with most Subpart S requirements by April 16, 2001, unless a compliance extension is granted in accordance with Subpart A provisions. Compliance with the HVLC collection and treatment requirements must be achieved by no later than April 17, 2006. This facility has been granted a 1 year compliance extension for the pulping condensate requirements.

27. Section 63.441 is a list of definitions. The proposed permit incorporates these definitions.

28. Section 63.442 is reserved.

29. Section 63.443 sets forth the standards for the pulping system at kraft, soda and semi-chemical mills. The facility addressed in this review report is a kraft mill and this section is applicable to this facility. However, those parts of 63.443 which address soda and semi-chemical mills are not applicable.

29.a. Part (a) identifies the equipment systems at kraft mills that are subject to the pulping system standards. These are also specified in the proposed permit. In general terms, the affected equipment systems are the LVHC and HVLC systems.

29.b. Part (b) applies to soda or semi-chemical mills and is not applicable in this case.

29.c. Part (c) states that the equipment systems identified in part (a) must be enclosed and vented to a closed-vent system and routed to a control device that meets the requirements in part (d). The closed-vent system requirements are in 63.450.

29.d. Part (d) specifies the control requirements for the equipment used to control the LVHC and HVLC gases. Part (d) allows the following options:

29.d.i. reduce total HAP emissions by 98 percent or more by weight;

29.d.ii. reduce the total HAP concentration at the outlet of a thermal oxidizer to 20 parts per million or less;

29.d.iii. reduce total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 1600 degrees F and a minimum residence time of 0.75 seconds; or

29.d.iv. reduce HAP emissions using a boiler, lime kiln or recovery furnace.

29.e. Part (e) states that periods of excess emissions shall not be a violation of the standard, provided that the time of excess emissions divided by the total operating time in a semi-annual period does not exceed:

29.e.i. one percent for control devices used to reduce the HAP emissions from the LVHC system; and

29.e.ii. four percent for control devices used to reduce the HAP emissions from the HVLC system; or

29.e.iii. four percent for control devices used to reduce the HAP emissions from both the LVHC and HVLC systems.

Discussion of 63.443

30. In general, the requirement is to capture emissions from the LVHC and HVLC systems, to transport those emissions through a closed-vent system to a control device, and destroy the HAPs by incineration in a process combustion unit or a thermal oxidizer which meets specified requirements. This facility has chosen to use a lime kiln as the primary means of reducing LVHC emissions, with a thermal oxidizer as a backup control device for use when the lime kiln is not operating.

31. The capture and closed-vent system requirements are specified in 40 CFR 63.450, which is discussed later in this report. However, in general, the closed-vent system is a system of ducts that gather LVHC and/or HVLC emissions from a number of process units, and carry the emissions to one or two larger ("main") duct systems which then transport the captured emissions to the control devices. These main duct systems are equipped with valves to direct the emissions to the main combustion device (lime kiln), or to the backup thermal oxidizer, or, if neither control device is operational, to vent the emissions directly to the atmosphere.

32. For the purpose of 63.443 part (e), the Department considers excess emissions to occur under the following circumstances: any part of the LVHC or HVLC systems is operating and producing LVHC or HVLC gases, and the vent valve on the LVHC or HVLC closed-vent system is open allowing gases to vent to atmosphere. All time periods when both of these conditions are met must be monitored and recorded to determine if the total period of excess emissions exceeds the 1 percent or 4 percent excess emissions allowance.

33. Each closed-vent duct system has only one vent (referred to as the "main vent") that must be monitored for compliance with the 1 percent or 4 percent excess emissions allowance. There are other locations upstream of the main vent where venting can occur, although these vents are normally closed. Examples include safety valves such as Pressure-Vacuum-Relief (PVR) valves and rupture discs. PVR valves open briefly to relieve pressure when sudden pressure increases occur, and then reclose. Pressure increases sufficient to open PVR valves may occur during normal operation, but such venting is brief and localized. Rupture discs are safety devices which, as their name implies, rupture to relieve pressure when pressure increases exceed safety limits. Rupture discs cannot reclose after rupturing, and therefore are intended to rupture only during abnormally high pressure conditions, such as equipment malfunctions.

34. Venting from other vent locations is not counted towards the 1 percent or 4 percent excess emission allowance. However, these other vents are considered part of the closed-vent system and are subject to the requirements of 40 CFR 63.450 and the associated monitoring requirements. The closed-vent monitoring requirements are discussed in more detail later in this report, but in brief, a monthly inspection of the closed vent system is required.

35. Subpart S requires that a Continuous Monitoring System (CMS) be used to monitor the combustion temperature of the thermal oxidizer (63.453(b)). In addition, an initial performance test is required by Subpart A to demonstrate that the thermal oxidizer is meeting either the 98 percent HAP destruction standard or the 20 ppm HAP emission limit, if the facility chooses to comply with one of these options. In addition to these requirements, the Department is proposing to require annual source testing (similar to the initial performance test) of the thermal oxidizer to ensure that it will always meet the destruction requirement or emission limit. An operating parameter (temperature) range must also be determined during the initial performance test and subsequent source testing. The thermal oxidizer must be operated within the allowed range to ensure that it continuously meets the treatment standard. The establishment of operating parameter ranges is discussed in the Establishing and Changing Operating Parameter Ranges section of this report, on page 25.

Description of rules, continued

36. Section 63.444 applies to pulping systems at sulfite process mills, and is not applicable to this facility.

37. Section 63.445 sets forth the standards for the bleaching system and is applicable to this facility.

37.a. Part (a) specifies which bleaching systems must comply with 63.445, and states that kraft, sulfite or soda pulp bleaching systems that use any chlorinated compounds must comply with 63.445. This facility is a kraft mill that uses chlorinated compounds (chlorine dioxide) for bleaching, and therefore must comply with the requirements of 63.445.

37.b. Part (b) states that each bleaching stage where chlorinated compounds are introduced shall be enclosed and vented to a close-vent system and routed to a control device that meets the requirements in part (c). The enclosure and closed-vent system must meet the requirements of 40 CFR 63.450. If process modifications are used to achieve the emission limitations in parts (c)(2) or (c)(3), then enclosures and closed-vent system are not required, unless appropriate.

37.c. Part (c) states that the control device shall:
- 37.c.i. reduce the total chlorinated HAP mass by 99 percent or more by weight;
- 37.c.ii. achieve an outlet concentration of 10 parts per million or less of total chlorinate HAP; or
- 37.c.iii. achieve an outlet mass emission rate of 0.001 kg of total chlorinate HAP per megagram of oven dry pulp (ODP).

37.d. Part (d) states that the facility must meet one of the following requirements in order to reduce chloroform air emissions:
- 37.d.i. comply with the waste water effluent limitation guidelines and standards set forth in 40 CFR Part 450; or
- 37.d.ii. introduce no chlorine or hypochlorite for bleaching in the bleaching system or line.

Discussion of 63.445

38. In general, the requirement is to capture HAP emissions from bleaching stages where chlorinated compounds are introduced, and to treat the emissions to meet the emissions limits specified in part (c). As an alternative, if a facility can meet the emissions limits in part (c)(2) or (c)(3) by making process modifications, then capture and treatment isn't required.

39. The enclosures and closed-vent systems must meet the requirements in 40 CFR 63.450, which is discussed later in this report. There is no excess emission allowance for the bleaching system as there is for the pulping system.

40. This facility will use a gas scrubber to meet the treatment requirements in part (c). Subpart S requires that a Continuous Monitoring System (CMS) be used to monitor three scrubber operating parameters: scrubbing liquid pH or oxidation/reduction potential (ORP); the scrubber liquid flow rate; and scrubber inlet gas flow.

EPA has issued guidance that states that scrubber inlet fan operation may be monitored as a surrogate for scrubber inlet gas flow.

41. An initial performance test is required by Subpart A to demonstrate that the scrubber is meeting one of the HAP emission limits set forth in part (c), whichever the facility chooses to comply with. In addition to this requirement, the Department is proposing to require annual source testing (similar to the initial performance test) of the scrubber to ensure that it will always meet the emission limit. Operating parameter ranges must also be determined during the initial performance test and subsequent source testing. The scrubber must be operated within the allowed ranges to ensure that it continuously meets the treatment standard. The establishment of operating parameter ranges is discussed in the Establishing and Changing Operating Parameter Ranges section of this report, on page 25.

42. This facility will comply with part (d) by introducing no chlorine or hypochlorite into any bleaching stage, other than residues or by-products of the chlorine dioxide production process. Currently, this facility uses only one chlorine compound for bleaching, chlorine dioxide. Chlorine dioxide is produced on-site in a chlorine dioxide generator. The chemical reaction that produces chlorine dioxide does not go to 100 percent completion, therefore some residual chlorine remains in the chlorine dioxide solution. In addition, it is possible that small amounts of hypochlorite may be formed in side-reactions. The Department regards these residues or by-products as unavoidable consequences of the chlorine dioxide production process, and feels that the facility will be in compliance with part (d) so long as no chlorine or hypochlorite other than these unavoidable amounts in the chlorine dioxide solution are introduced into the bleaching system.

Description of rules, continued

43. Section 63.446 sets forth the standards for the kraft pulping process condensates and is applicable to this facility.

43.a. Part (a) states that this section is applicable to mills using the kraft pulping process.

43.b. Part (b) states that this section applies to pulping process condensates from the following equipment systems:

- 43.b.i. each digester system;
- 43.b.ii. each turpentine recovery system;
- 43.b.iii. each evaporator system condensate from:
- 43.b.iv. the vapors from each stage where weak black liquor is introduced (feed stages), and
- 43.b.v. each evaporator vacuum system for each stage where weak black liquor is introduced (feed stages);
- 43.b.vi. each HVLC collection system; and
- 43.b.vii. each LVHC collection system.

43.c. Part (c) provides three options for collection and treatment of kraft pulping system condensates. The options are to collect and treat:

- 43.c.i. all of the condensates specified in part (b);
- 43.c.ii. the condensates from the LVHC and HVLC collection systems, plus 65 percent of the total HAP in the other condensates specified in part (b); or
- 43.c.iii. an amount of HAP from the condensates specified in part (b) that contain 7.2 pounds of HAP per ton of pulp produced for mills that do not perform bleaching, or 11.1 pounds of HAP per ton of pulp produced for mills that do perform bleaching.

43.d. Part (d) specifies that condensates must be collected in a closed collection system that meets the Individual Drain System requirements set forth in 40 CFR Part 63, Subpart RR, with certain exceptions. The exceptions generally are that closed vent systems must meet the requirements of 40 CFR 63.450 instead of the closed vent requirements in Subpart RR, and recordkeeping requirements specified in Subpart S must be followed rather than some of the recordkeeping requirements in Subpart RR.

43.e. Part (e) specifies five condensate treatment options. The options are:

43.e.i. recycle the condensate to an equipment system that meets the collection and treatment requirements specified in 40 CFR 63.443 (i.e., the pulping system requirements, discussed above);

43.e.ii. discharge the condensate below the liquid surface of a biological treatment system and meet one of the three standards below (that is, e.iii, e.iv, or e.v);

43.e.iii. treat the condensates by some other means to reduce or destroy the total HAPs by at least 92 percent by weight;

43.e.iv. treat the condensates to remove 6.6 pounds of HAPs per ton of pulp produced, or achieve a HAP concentration of 210 parts per million or less at the outlet of a control device at mills that do not perform bleaching; or

43.e.v. treat the condensates to remove 10.2 pounds of HAPs per ton of pulp produced, or achieve a HAP concentration of 330 parts per million or less at the outlet of a control device at mills that do perform bleaching.

43.f. Part (f) specifies that each HAP that is removed from the condensates during treatment and handling must be controlled as specified in 40 CFR 63.443(c) (i.e., the pulping system collection and treatment requirements), except that this does not apply to HAPs discharged below the liquid surface of a biological treatment system.

43.g. Part (g) states that for each control device used to treat condensates by the 3rd, 4th or 5th option listed in part (e), periods of excess emissions are not a violation of the standard provided that the total time of excess emissions does not exceed 10 percent of the total operating time in each semi-annual reporting period.

43.h. Part (h) requires each affected mill to evaluate all new or modified pulping process condensates or changes in production to determine if they meet the requirements of this section.

43.i. Part (i) states that mills that produce both bleached and unbleached pulp may meet prorated collection and treatment standards and specifies how the prorated standards are to be calculated.

Discussion of 63.446

44. In general, the requirement is to collect and treat specified amounts of HAPs in the condensate streams listed in this section. The condensates listed in this section are often referred to as the "named streams". In some mills, there may be other condensate streams that are not listed in this section; these are referred to as "other streams" to distinguish them from the "named streams".

45. This section of the rule allows the mill to either collect all of the named stream condensates, or collect a subset of the named stream condensates that contains a specified amount of HAPs. This mill has elected to comply with the so-called "pound per ton option". This requirement (40 CFR 63.446(c)(3)) is to collect at least 11.1 pounds of HAPs per ton of pulp produced from any subset of the named steams.

46. The U.S. Environmental Protection Agency (EPA) Region 10 office believes the specific condensate streams that are to be collected and treated must be listed in the permit. However, as stated above, Subpart S does not require collection of all condensate streams; two compliance options allow the permittee to collect a subset of the named streams. It is possible that the permittee may need to collect and treat different streams during the term of the permit. One reason for such a change is a minor process change to alter where black liquor is fed into the multiple-effect evaporators. One of the named streams is the condensate from the feed stage of the evaporators; by changing the feed stage, the condensate stream that must be collected is also changed. Where the permittee can project likely future changes, it is possible to develop alternate lists of condensate streams to be collected. Each such list represents an alternate operating scenario for compliance with the condensate collection and treatment standard. The permittee may elect to comply with any of the listed alternate operating scenarios, and must maintain records of which scenario they are operating under and the dates on which they changed from one scenario to another. If the permittee wishes to collect and treat a combination of streams that are not listed as alternate operating scenarios, a permit modification will be required to list the desired combination. The alternate scenarios for condensate collection and treatment, if any, are listed in the permit.

47. The permittee must conduct an initial performance test (called the Initial Condensate Characterization Study, or ICCS) to demonstrate that the specified minimum amount of HAPs is being collected. The results of the ICCS will also be used to establish emission factors for continuous monitoring of the collected condensate streams. After the ICCS, the permittee must monitor specified process parameters on a daily basis, and multiply by the emission factors to calculate the amount of HAP collected each day. Compliance with the collection standard will be based on a rolling average of the daily amount of HAPs collected. Periodic testing will be required to verify that the emission factors are still valid; if the testing fails to verify an emission factor, a new emission factor must be established. Emission factor determination and verification is discussed in more detail in the Condensate Emission Factor Determination and Verification section on page 26 of this report. The rolling average period is discussed in more detail in the Condensate Collection and Treatment Rolling Average Period section on page 26 of this report.

48. The collection system requirements are specified in the Individual Drain System requirements in 40 CFR Part 63, Subpart RR; however, certain sections of Subpart RR are excluded and Subpart S provisions apply instead. In general, these requirements are intended to ensure that the collection system is a closed system that will prevent the release of HAPs to the atmosphere. If condensate streams are handled in such a way that HAP gases are released from the liquid condensates, the HAP gases must be collected and treated in accordance with the pulping system (LVHC/HVLC) collection and treatment requirements.

Description of rules, continued

49. Sections 63.448-63.449 are reserved.

50. Section 63.450 sets forth the standards for enclosures and closed vent systems, and is applicable to this facility.

50.a. Part (a) states that each enclosure and closed-vent system specified in Sections 63.443(c), 63.444(b) and 63.445(b) shall meet the requirements of this section. Sections 63.443(c) and 63.445(b) are applicable to this facility; section 63.444(b) applies to sulfite process mills and is not applicable to this facility.

50.b. Part (b) states that each enclosure shall maintain negative pressure at each enclosure or hood opening as demonstrated by the procedures in Section 63.457(e). It further states that each enclosure or hood opening that is closed during the initial performance test must remain closed at all times except when necessary to use the opening for sampling, inspection, maintenance or repairs.

50.c. Part (c) states that each component of the closed-vent system that is operated at positive pressure and located prior to a control device shall have no detectable leaks, as indicated by a test instrument reading of less than 500 parts per million by volume above background. The test procedures are specified in Section 63.457(d).

50.d. Part (d) states that each bypass line in the closed-vent system that could divert HAP gas streams to the atmosphere must meet one of the following requirements:

50.d.i. install a flow indicating monitor in such a way as to indicate when gas flow is occurring in the bypass line, and monitor the flow indicating device at least once every 15 minutes; or

50.d.ii. for bypass line valves that are not computer controlled, the valve must be maintained in the closed position and sealed in such a way that the valve cannot be opened without breaking the seal.

Discussion of 63.450

51. In general, the requirement is ensure the effective capture of HAP gases in enclosures or hoods; to ensure that the closed-vent system is essentially leak-free; and to control bypass valves that could release the HAP gases to atmosphere by either monitoring gas flow in the bypass line or ensuring that manually controlled valves are closed and sealed.

52. Enclosures or hoods must be kept under negative pressure; that is, air must flow into the enclosure or hood to ensure the capture of HAP gases.

53. Any portions of the closed vent system that are operated under positive pressure must be essentially leak-free as determined by the specified test method.

54. Subpart S provides an allowance for a certain amount of bypassing. Bypass lines must be monitored by installing a device or devices that indicate when gas flow is occurring in the bypass line. EPA provided guidance that indicates that it is not necessary to install a flow monitor, but that any device or combination of devices that indicate flow in the bypass line can be used to meet this requirement. An example of a combination of devices that would indicate flow in the bypass line is the following: a facility can monitor operation of the closed-vent system, and also monitor the position of the bypass valve. If the closed-vent system is operating and the bypass valve is open, this provides a positive indication that HAP gases are flowing in the bypass line (i.e., are being diverted to atmosphere). This facility will monitor flow in the bypass line by the following method: Operation of all LVHC or HVLC processes will be monitored, and the position of the main vent valve(s) will be monitored. If an LVHC or HVLC process is operating and a main vent valve is open, the facility will be considered to be diverting LVHC or HVLC gases to the atmosphere.

55. In the case of bypass valves that are manually operated, the permittee must keep the bypass valve in the closed position and sealed in such a way that the seal must be removed or broken before the valve can be opened. This is to ensure that HAP gases are not unintentionally diverted to atmosphere by mistakenly opening the valve.

Description of rules, continued

56. Sections 63.451 – 63.452 are reserved.

57. Section 63.453 sets forth monitoring requirements for all sections of Subpart S. Most parts of this section are applicable to this facility.

57.a. Part (a) states that a Continuous Monitoring System (CMS) must be used for monitoring as specified in Parts (b) through (m), except as allowed in Part (m). The CMS must be installed, operated and maintained in accordance with the manufacturer's specifications. It is the Department's view that requiring the CMS to be installed, operated and maintained in accordance with the manufacturer's specifications does not constitute a CMS performance standard. This distinction is important because certain parts of the NESHAP General Provisions (Subpart A) only apply if CMS performance standards are specified.

57.b. Part (b) states that a CMS shall be used to monitor the temperature in the firebox of each thermal oxidizer used to control LVHC and/or HVLC HAP gases. As an alternative, a CMS can be used to monitor the HAP or methanol concentration in the thermal oxidizer outlet if the facility chooses to comply with 63.443(d)(2).

57.c. Part (c) states that a CMS shall be used to monitor the following operating parameters for each scrubber used to control emissions from the bleaching system:
57.c.i. pH or oxidation/reduction potential (ORP);
57.c.ii. the scrubber gas inlet flow rate; and
57.c.iii. the scrubber liquid influent flow rate.

57.d. Part (d) provides an option to Part (c) and allows a CMS to be used to measure the scrubber outlet chlorine concentration. This part is not applicable to this facility because a chlorine CMS will not be used.

57.e. Part (e) applies only to sulfite process mills, and is not applicable to this facility.

57.f. Part (f) applies only to sulfite process mills, and is not applicable to this facility.

57.g. Part (g) states that a CMS shall be used to monitor the following operating parameters if a steam stripper is used to comply with the pulping condensate treatment standards in 6.446.
57.g.i. the process wastewater feed rate;
57.g.ii. the steam feed rate; and
57.g.iii. the process wastewater column feed temperature.
This part is not applicable to this facility since a steam stripper will not be used.

57.h. Part (h) provides an option to Part (g) and allows a CMS to be used to measure the steam stripper methanol outlet concentration for compliance with 63.446(e)(4) or (e)(5). This part is not applicable to this facility since a steam stripper will not be used.

57.i. Part (i) states that a CMS will be used to monitor appropriate parameters to comply with the condensate applicability requirements in Section 63.446(c). The parameters must be determined according to procedures specified in Part (n) of this section.

57.j. Part (j) specifies the monitoring procedures that are to be used if a biological treatment system is used to comply with the pulping condensate treatment standard in Section 63.446(e)(2); this part is extensive and is only briefly summarized here. An operating parameter must be selected and an operating range established during initial performance testing. The parameter must be monitored each day. If the parameter goes out the established operating range, it is either considered a violation of the standard, or else the permittee may elect to perform a performance test immediately to determine if the standard is being met. This section allows for alternate procedures in the event that unsafe sampling conditions exist.

57.k. Part (k) specifies the monitoring and repair requirements for each enclosure and closed-vent system.

57.k.i. The monitoring requirements are:

57.k.i.A. each enclosure opening must be visually inspected at least once every 30 days to ensure the opening is closed and sealed;

57.k.i.B. each closed-vent system must be visually inspected at least once every 30 days for visible evidence of defects;

57.k.i.C. each portion of a closed-vent system that is under positive pressure must be inspected initially and annually for leaks, using the method specified in Section 63.457(d);

57.k.i.D. each enclosure opening must be monitored to ensure that the opening is maintained at negative pressure using the procedure specified in Section 63.457(e); and

57.k.i.E. each bypass valve that is not computer controlled must be inspected at least once every 30 days to ensure it is closed and that the gas stream is not being diverted to atmosphere.

57.k.ii. The enclosure and closed-vent system repair requirements are:

57.k.ii.A. a first effort to repair any defects shall be made as soon as practicable but no later than 5 days after identifying the problem;

57.k.ii.B. the repair must be completed no later than 15 days after the problem is identified, unless the permittee can demonstrate that the repair is technically infeasible without shutting down the process, or if emissions resulting from immediate repair would be greater than the emissions likely to result from delaying the repair. If delayed, the repairs must be completed by the end of the next process shutdown.

57.l. Part (l) specifies the monitoring and repair requirements for each process condensate closed collection (individual drain) system. The monitoring requirements are:

57.l.i. each process condensate closed collection system must be inspected at least once every 30 days using procedures specified in Subpart RR, with certain exceptions;

57.l.ii. each condensate tank must be inspected initially and annually for leaks using the procedure specified in Section 63.457(d).

57.l.iii. The condensate closed collection system repair requirements are as specified in Subpart RR, 63.964(b). The repair requirements are very similar to the closed-vent system repair requirements, above.

57.m. Part (m) states than any facility using a control device, technique or alternative parameter other than those specified in parts (b) through (l) of this section shall install a CMS and establish appropriate operating parameters that demonstrate, to the Administrator's satisfaction, continuous compliance with the applicable requirements. This part is not applicable at this time since this facility will not use a control device, technique or alternative parameter other than those specified in parts (b) through (l) of this section.

57.n. Part (n) specifies procedures for establishing or reestablishing the operating parameter ranges that are required by Subpart S.

57.o. Part (o) states that control devices must be operate within the approved operating parameter ranges, and that operation outside the approved range constitutes a violation of the standard except as provided in part (p) of this section, and sections 63.443(e) (the excess emissions allowance for the LVHC and HVLC control system) or 63.446(g) (the excess emissions allowance for a steam stripper).

57.p. Part (p) specifies additional requirements to be taken if the operating parameters specified in part (j) of this section (monitoring requirements for the biological treatment system used to treat process condensates) are found to be out of the allowed range. Additional monitoring is required to demonstrate that the treatment system is meeting the required level of control, and steps must be taken to repair or adjust the process to correct the parameter excursion and to minimize HAP emissions during the parameter excursion.

57.q. Part (p) also states that a parameter excursion (out of the allowed range) is not a violation of the standard if the additional monitoring required demonstrates compliance with the standard and no process changes have been made that would influence the results of the additional monitoring. Part (p) is also undergoing revision by the EPA and the final requirements are not known at this time

Discussion of 63.453

58. Section 63.453 specifies the monitoring requirements for Subpart S. In most cases, the monitoring requirements are relatively straightforward and no additional discussion is needed. However, additional discussion is needed for parts (i) and (n).

59. Part (i) states that a CMS shall be used to monitor appropriate parameters to comply with the condensate applicability requirements in Section 63.446(c). Section 63.446(c) specifies three condensate collection requirements: collect all named streams; collect LVHC and HVLC condensates plus 63 percent of the HAPs in the other named streams; or collect 7.2 (if unbleached) or 11.1 (if bleached) pounds of HAP per ton of pulp produced. There is no attempt in part (i) to specify how the required monitoring is to be done; it is left up to the permitting authority to determine or approve an appropriate monitoring method.

60. The Department has determined that the following general approach is appropriate for monitoring with respect to the requirement to collect 7.2 pounds (if unbleached) or 11.1 pounds (if bleached) of HAP per ton of pulp produced:

60.a. During the Initial Condensate Characterization Study (ICCS), condensate streams must be sampled and analyzed to determine their methanol content. Sampling must occur over at least a 15 day period, with samples taken on a random schedule on at least 25 percent of the days (rounded up) during the sample period.

60.b. The sample results will be used to calculate the a methanol "emission factor", or EF, for each stream, based on a monitorable operating parameter such as condensate flow or pulp production.

60.c. The total pounds of methanol collected over the ICCS period is calculated by multiplying the emission factor by the monitored parameter, and then adding up the total pounds from each stream.

60.d. The daily pulp production over the ICCS period must also be monitored, and summed to give the total pulp production during the sampling period.

60.e. The total pounds of methanol collected over the ICCS period is divided by the total pulp production over the ICCS period to demonstrate compliance with the HAP collection requirement; this completes the initial performance test for the condensate collection requirement.

61. After the ICCS, a CMS must be used per part (i) to demonstrate continuous compliance with the condensate collection standard. This will be done by daily monitoring of the parameter that was monitored during the ICCS. The monitored parameter value is then multiplied by the emission factor; his calculation gives the pounds of methanol collected each day from each condensate stream. In addition, pulp production must be monitored each day. Continuous compliance with the condensate collection standard will be demonstrated by calculating the rolling average amount of methanol collected per ton of pulp produced. This will be done by calculating the total pounds of methanol collected over the averaging period, and dividing by the total pulp production over the averaging period. The averaging period is discussed in more detail in the Condensate Collection and Treatment Rolling Average Period section of this report on page 26.

62. In addition to the daily monitoring described above, periodic verification testing is required to ensure that the methanol content (i.e., the emission factor, EF) for each condensate stream does not change significantly over time. Verification testing involves sampling each condensate stream in a manner similar to the ICCS procedure, and recalculating the emission factor. If the emission factor determined during the verification test is higher than the EF, the EF is considered verified, and the permittee may combine the verification test data with the original EF data. If the emission factor during the verification test is lower than the EF, it must be statistically compared to the EF using a one-sided T-test. If the comparison shows that the difference is not significant, then the EF is considered verified, and the permittee may combine the verification test data with the original EF data. If the comparison shows that the EF during the verification test is significantly lower than the EF, then the permittee must repeat the ICCS procedure and determine a new EF. The new EF must be used retroactively to the beginning of the calendar quarter in which the verification testing was initiated.

63. The verification frequency is not fixed, but is determined each year. The permittee must perform a calculation at the beginning of each year that compares the amount of methanol actually collected during the previous year to the amount of methanol that Subpart S requires to be collected. This is a measure of "overcollection" of methanol. The Department believes that overcollection of methanol gives greater confidence that the permittee will be in continuous compliance with the collection standard; and, the higher the degree of overcollection, the lower the need is for EF verification. Thus, the EF verification frequency is determined by the degree of overcollection, with the verification frequency decreasing as the degree of overcollection increases. The verification frequency for each year is determined at the beginning of each year, and can range from once per calendar quarter to not required that year. However, even with a continuously high degree of overcollection, EF verification testing is required at least once every five years.

64. Part (n) specifies the procedures to be followed to establish or reestablish the value for each operating parameter that is required to be monitored in Section 63.453. The approach we have taken in writing this permit is to specify within the permit how operating parameter ranges are to be established for each affected control device. The operating parameters specified in Section 63.453 must be determined during the initial performance test of each control device or system. In all cases, periodic retesting is required by the permit. Parameter values monitored during retests can be used to expand the allowed operating range; the permit specifies what values can be used and how the operating parameter range can be expanded. We believe this approach meets the requirement in part (n).

Description of rules, continued

65. Section 63.454 sets forth the recordkeeping requirements for Subpart S.

65.a. Part (a) states that the facility must comply with the recordkeeping requirements in 40 CFR 63.10 (NESHAPs General Provisions, Subpart A), as well as the requirements in parts (b) through (d) of Section 63.455.

65.b. Part (b) states that the facility must maintain a site-specific inspection plan for each applicable enclosure opening, closed-vent system, and closed collection system, and specifies the information that must be recorded during each inspection.

65.c. Part (c) applies only to facilities complying with the Voluntary Advanced Technology Incentives Program for Effluent Guidelines (per Section 63.440(d)(3)(ii)(B), and is not applicable to this facility.

65.d. Part (d) states that the facility must record the CMS operating parameters specified in Section 63.453 and meet the requirements in part (a) for any new affected process or pulping process condensate stream that becomes subject to the standard due to a process change or modification.

65.e. Part (e) states that the facility must prepare a written record of the conditions that would make sampling from an open biological treatment system unsafe.

65.f. Part (f) states that the facility must keep written records of the results of any performance tests of the open biological treatment system.

Discussion of 63.454

66. In general, this permit specifies the recordkeeping that is required for each monitoring condition within the permit. Recordkeeping requirements are dependent upon the type of monitoring required to demonstrate compliance with each standard or limitation. In general, the recordkeeping requirements include such records as inspection plans, inspection results, corrective actions taken (if corrections are necessary), as well as all CMS monitoring results and all other records needed to show compliance with the permit and the standard. In addition, Subpart A requires certain monitoring pertaining to CMS; the Subpart A requirements have been included where necessary. The Subpart A recordkeeping requirements will be discussed in more detail in the Subpart A section of this report.

Description of rules, continued

67. Section 63.455 sets for the reporting requirements for Subpart S.

67.a. Part (a) states that the facility must comply with the reporting requirements of Subpart A. It further states that the initial notification required by Subpart A must be submitted by April 15, 1999.

67.b. Part (b) requires affected facilities to submit a non-binding control strategy with the initial notification, with an update every two years thereafter.

67.c. Part (c) applies only to facilities complying with the Voluntary Advanced Technology Incentives Program for Effluent Guidelines (per Section 63.440(d)(3)(ii)(B), and is not applicable to this facility.

67.d. Part (d) states that the facility must meet the reporting requirements in part (a) upon startup of any new affected process equipment or pulping process condensate stream that becomes subject to the standard due to a process change or modification.

67.e. Part (e) states that the facility must provide at least 15 days prior notification before conducting any performance tests that will be used to revise the operating parameter range for the open biological treatment system.

67.f. Part (f) states that the facility must provide notification of the onset of unsafe sampling conditions within 24 hours of the onset.

Discussion of 63.455

68. This facility submitted the required initial notification on or before April 15, 1999. The permit includes the reporting requirements in Subpart A; this is discussed in more detail in the Subpart A section of this report.

Description of rules, continued

69. Section 63.456 is reserved.

70. Section 63.457 specifies test methods and procedures.

70.a. Part (a) states that an initial performance test is required for all emission sources subject to Subpart S, except for those controlled by a combustion device designed and operated as specified in Section 63.443(d)(3) or (d)(4). Section 63.443(d)(3) allows the use of a thermal oxidizer that meets specified temperature and residence time requirements for the control of LVHC and/or HVLC gases. Section 63.443(d)(4) allows the control of LVHC and/or HVLC gases by introducing the gases into the combustion zone of boiler, lime kiln or recovery furnace.

70.b. The remainder of Section 63.457 specifies test methods and procedure, and is not summarized here.

Discussion of 63.457

71. Initial performance tests are required for all affected emissions sources, with the exceptions described above. Initial performance tests must be completed within 180 days after the date by which compliance with each standard is required. Initial performance test requirements are specified in the permit.

Description of rules, continued

72. Section 63.458 is delegation of authority, and states that certain sections of Subpart S will not be delegated to the states. The sections that will not be delegated are:

72.a. Section 63.6(g), use of an alternate non-opacity emission standard;
72.b. Section 63.453(m), use of an alternative monitoring parameter;
72.c. Section 63.457(b)(5)(iii), use of an alternative test method for total HAP or methanol in vents; and
72.d. Section 63.457(c)(3)(ii), use of an alternative test method for total HAP or methanol in wastewater.

73. Section 63.459 is reserved. This is the last section of Subpart S.

DISCUSSION OF SUBPART A REQUIREMENTS

74. Facilities subject to Subpart S are also subject to the NESHAP General Provisions in 40 CFR Part 63, Subpart A. These requirements are briefly summarized below.

75. Section 63.1 pertains to applicability. There are no permit conditions based on this section.

76. Section 63.2 contains definitions. The definitions are included in the permit by reference.

77. Section 63.3 identifies units of measure and abbreviations. There are no permit conditions based on this section.

78. Section 63.4 describes prohibited activities and circumvention. There are no permit conditions based on this section.

79. Section 63.5 describes construction and reconstruction. There are no permit conditions based on this section.

80. Section 63.6 pertains to compliance with standards and maintenance requirements. Certain permit conditions are based on portions of this section:

80.a. Part (e)(3) requires the development of a Startup, Shutdown and Malfunction (SSM) plan, and states the SSM plan must be incorporated into the permit by reference. The permit requires that an SSM plan be developed in accordance with Section 63.6(e)(3) and incorporates it by reference.

80.b. Part (i) pertains to extension of compliance with emission standards. Section 63.6(i)(4)(i)(A) describes the procedures and requirements for a facility to request a one-year extension to the compliance date specified in a NESHAP.

81. Section 63.7 pertains to performance testing requirements. This section states that an initial performance test must be conducted within 180 days of a standard becoming applicable, and sets out notification, quality assurance and test conduct requirements. These requirements have been included in the permit.

82. Section 63.8 pertains to monitoring requirements. This section specifies requirements for continuous monitoring systems (CMS), including: a requirement to address routine or otherwise predictable CMS malfunctions in the facility's Startup, Shutdown and Malfunction (SSM) plan, and a requirement to develop a CMS quality control program. These requirements have been included in the permit.

83. Section 63.9 pertains to notification requirements, including the initial notification requirement for affected sources.

84. Section 63.10 pertains to recordkeeping and reporting requirements. These requirements have been included in the permit. However, 40 CFR 63.10(c)(6) is not applicable because Subpart S does not specify a CMS performance standard.

85. Section 63.11 pertains to flares and is not applicable to this facility.

86. Section 63.12 pertains to state authorities and delegations.

87. Section 63.13 gives the addresses of state air pollution control agencies and EPA regional offices.

88. Section 63.14 incorporates a number of documents by reference; this is the last section in Subpart A.

Discussion of Subpart A requirements

89. Per Section 63.6(i)(4)(i)(A), this facility has requested and been granted an extension to the compliance date for compliance with the pulping process condensate collection and treatment requirements in Section 63.446. The request was made because this section of Subpart S was undergoing revision by EPA in 1999. Until the final rule is promulgated, the facility is unable to complete engineering and design of the condensate collection and treatment systems required by Subpart S. The Department agreed that this was a valid reason for a compliance extension and granted it. Compliance with the Section 63.446 requirements must be achieved by April 16, 2002.

90. The Department believes that Oregon's Source Testing Manual generally complies with the performance testing requirements in Section 63.7 and forms the basis for the test requirements in the permit. However, the pre-test notification and test report submittal requirements are different, and the permit specifies the pre-test notification and test report submittal requirements that are set forth in Section 63.7 for initial performance tests.

91. The permit includes a requirement to address routine or otherwise predictable CMS malfunctions in the facility's Startup, Shutdown and Malfunction (SSM) plan, and a requirement to develop a CMS quality control program, as required by Section 63.8.

92. The initial notification required in Section 63.9 was required by Subpart S to be submitted not later than April 15, 1999. Initial notification was submitted on or before that date by this facility.

93. Recordkeeping requirements specified by Section 63.10 have been incorporated into the permit where they are applicable. The reporting requirements specified by Section 63.10 have also been incorporated into the permit.

BASIC LAYOUT OF THE NESHAP SECTION OF THE PERMIT

94. The MACT portion of the permit is arranged as described below. The permit sections denoted by (*) include the applicable requirements (i.e., standards or limitations), and the monitoring and recordkeeping requirements associated with each applicable requirement. The general structure within theses sections is that conditions specifying applicable requirements are followed immediately by the associated monitoring condition(s); the recordkeeping requirements are subparts of the monitoring condition(s). In some cases there may be two or more similar applicable requirements, followed by a single monitoring condition that addresses all of the preceding applicable requirements; or a single applicable requirement may be followed by two or more monitoring conditions that apply to the same applicable requirement. However, the general structure is maintained; that is, the applicable requirement (s) is(are) followed immediately by the associated monitoring and recordkeeping.

94.a. Generally applicable requirements, such as definitions, compliance extensions, SSM plan, CMS quality assurance program, and Subpart A reporting requirements.

94.b. Pulping system (LVHC/HVLC) requirements section (*).

94.c. Bleaching system requirements section (*).

94.d. Pulping process condensate requirements section (*).

94.e. Closed-vent system requirements section (*).

94.f. Individual drain system requirements section (*).

94.g. Performance testing/source testing procedures, and other procedures referenced elsewhere in the permit.

ESTABLISHING AND CHANGING OPERATING PARAMETER RANGES

95. Subpart S requires that operating parameter ranges be established and monitored continuously for several affected systems or pieces of equipment, e.g., the thermal oxidizer and bleach plant scrubber. In most cases, the operating parameter ranges will be determined after permit issuance, during required performance (source) tests. In addition, it is expected that the applicant will wish to revise or expand the allowed operating range while conducting the periodic source tests that the permit requires.

96. If the operating parameter ranges were specified in the permit, the Department would have to revise the permit a number of times during the permit term to incorporate and revise operating parameter ranges. In order to avoid this administrative burden, operating parameter ranges will not be specified in the permit. Instead, the permit specifies exact, replicable procedures for the establishment and revision of the operating parameter ranges.

97. In general, operating parameter ranges are determined from parameter monitoring data gathered during initial performance testing. Similarly, operating parameter ranges may be revised using parameter monitoring data gathered during subsequent periodic testing. The permit specifies exactly how the parameter monitoring data is to be used to establish or revise the operating parameter ranges; there is no judgment involved. The permittee must maintain records of the operating parameter ranges and the dates on which they were established or changed.

CONDENSATE EMISSION FACTOR DETERMINATION AND VALIDATION

98. A continuous monitoring system is required to demonstrate continuous compliance with the condensate collection requirement of Section 63.446. The approach taken by the Department is that the permittee must monitor an operational parameter, and then multiply the parameter value by an "emission factor" (EF) to determine the amount of methanol collected each day. The EF for each stream is determined initially during the Initial Condensate Characterization Study (ICCS); following the ICCS, periodic verification of each EF is required. The procedure that must be used to determine and verify each EF is discussed below.

99. Condensate emission factors will not be specified in the permit. The permit specifies exact, replicable procedures for establishing, verifying and/or revising condensate emission factors.

100. Condensate stream samples taken during the ICCS must be averaged to determine the EF for each collected stream. In addition, the standard deviation of the samples must be determined. Later verification testing must occur over at least a 15-day period, with samples being taken on at least 25 percent of the days (rounded up to the next whole day). The average and standard deviation of the verification samples must be calculated.

101. If the average of the verification samples is less than the current EF, then the verification sample results must be compared to the original sample results, using a one-sided T-test at the 95 percent confidence level. If the T-test comparison shows that the verification samples are not significantly less than the EF, then the EF is considered validated, and the verification samples may be combined with the original data set and a revised EF calculated as above.

102. If the average of the verification samples is found to be significantly less than the EF, then the permittee must determine a new EF for the condensate stream or streams in question. Determination of a new EF follows the same procedure as used in the ICCS. The verification samples may comprise all or part of the sampling required to establish a new EF. Once a new EF is determined by the permittee, the permittee must use the new EF retroactively to the beginning of the calendar quarter in the which the failed verification test began.

103. All of the procedures and calculations described above are specified in the permit. In particular, the procedure for conducting the t-test comparison is fully detailed in the CONDENSATE EMISSION FACTOR VERIFICATION PROCEDURE.

CONDENSATE COLLECTION AND TREATMENT ROLLING AVERAGE PERIOD

104. The pulp and paper industry has found, based on the limited data available at this time, that the amount of methanol collected from the named condensate streams can vary significantly from day to day. In general, this variability occurs for two reasons: variability in the amount of condensate produced, and variability in the amount of HAP (methanol) in each condensate.

105. Variability in the amount of condensate produced occurs because portions of the pulping process can be shut down or operated at lower rates while other portions continue to operate at or near the full rate. As an example, it is possible for a mill to operate its digester for a period of time without operating its recovery furnace. The digester produces black liquor, which is burned in the recovery furnace to recover pulping chemicals and produce steam. Storage tanks are used to accumulate black liquor while the recovery furnace is shut down. The digester and its associated equipment produce some of the named condensate streams, while other named streams are produced in the multiple-effect evaporators that are used to concentrate the black liquor before it is burned in the recovery furnace. When the recovery furnace is not operating, the evaporators are also not operating, and no condensates are produced from this equipment. In this example, the volume of condensates available to be collected is less than the "normal" amount, and the amount of methanol available to be collected is therefore less. There are other operational variations that can have the same result.

106. Variability in the concentration of methanol in each condensate stream also occurs. The reasons for this variability are not well understood, but indications are that the age and species of wood chips used by the mill are two factors that affect the amount of methanol produced. Mills may use different wood species to produced different grades of paper. Wood chip age is affected by the age of the chips delivered to the mill, and how long chips are stored before use. Other currently unknown factors may influence methanol production as well.

107. The result of the operational and methanol production variability discussed above is that the amount of methanol that is collected each day can vary over a significant range. On a short-term basis, the amount of methanol collected can range from amounts significantly lower than what is required by Subpart S, to amounts significantly higher. The Department believes that the intent of Subpart S is that the average amount of methanol collected must equal or exceed the amount required by the standard. Thus, the Department is proposing that compliance with the methanol collection requirement be calculated on a rolling average basis, updated daily. This means that the permittee must collect data each day, and then calculate an average using the current day's data plus the data from the preceding days within the averaging period.

108. The Department and EPA Region 10 office believe that a 30-day averaging period should be reasonable and appropriate for many mills. A longer averaging period is not precluded; however, we believe a longer averaging period needs to be justified by longer term data. Information presented by the pulp and paper industry indicates that condensate methanol can not only vary from day to day, but can also show significant variability in the longer term. It is expected that most mills will not have long term data on condensate methanol during the compliance demonstration period. Testing over a relatively short-term period, such as the Initial Condensate Characterization Study (ICCS), will not provide enough information to properly characterize long term methanol variability. To allow time to collect longer-term data while assuring compliance with the standard, the Department believes it is appropriate to allow up to a 60-day averaging period for the first year of operation. Thereafter, the permittee must either request that the averaging period be reduced to 30 days or less, or provide justification for an averaging period longer than 30 days. Justification requires sufficient sample results to demonstrate that condensate variability is not due to undercollection of condensates.

INCORPORATION OF PSD PERMIT 04-0003 PROVISIONS AND REQUIREMENTS

109. The permittee obtained a Prevention of Significant Deterioration (PSD) permit in 2000, for the construction of a new paper machine (number 6). The PSD permit authorized an increase in the Plant Site Emission Limit (PSEL) for NOx from 1630 tons per year to 2167 tons per year, and also increased the netting basis for NOx to 2167 tons per year. This increase has been incorporated into the proposed permit.

110. In addition to the NOx PSEL increase above, NOx emission limits for dryers and predryers on all of the paper machines were established. These emission limits have been incorporated into the proposed permit.

PERMIT CONDITIONS RELATED TO GAS TURBINE POWERED ELECTRICAL GENERATORS

111. The permittee requested that conditions relating to gas turbines be included in the permit so that they will have the flexibility to operate gas turbine powered electrical generators.

112. Gas turbines are subject to Oregon's general opacity and particulate matter emissions standards, as well as the Federal New Source Performance Standard (NSPS) for Gas Turbines, 40 CFR Part 60, Subpart GG. Permit conditions have been added to establish the opacity, particulate matter and NSPS limitations, as well as the necessary monitoring and recordkeeping.

113. A performance test of the gas turbine(s) must be performed within 180 days of startup. During the performance test, the emission rates for PM, NOx, CO and VOC must be determined. Emission factors will be derived from the test results and used to determine emissions from the turbine(s).

114. The Department has also included a Typically Achievable Control Technology (TACT) requirement for the turbines. In past permitting of gas turbines, the Department learned that carbon monoxide (CO) emissions are generally lowest when the turbine is operated at full load, and that the CO emissions increase significantly at lower loads. The Department proposes to require that the turbine be operated at not less than 90 percent of full load at all times in order to minimize CO emissions. This condition also helps ensure accurate emissions estimates, since emission factors will (most likely) only be determined at full load.

PERMIT CONDITIONS RELATED TO DIESEL ENGINE POWERED ELECTRICAL GENERATORS

115. The permittee requested that conditions relating to diesel engines be included in the permit so that they will have the flexibility to operate diesel powered electrical generators.

116. Diesel engines are subject to Oregon's general opacity and particulate matter emissions standards. Permit conditions have been added to establish the opacity, particulate matter and NSPS limitations, as well as the necessary monitoring and recordkeeping.

117. The Department has also included two Typically Achievable Control Technology (TACT) requirements for diesel engines. The requirements are to use only low-sulfur fuel, and to install a catalytic exhaust emission reduction system. These requirements are identical to requirements in the Department's proposed General Permit for diesel powered electrical generators, and discussed below.

117.a. Low-sulfur diesel fuel, with a maximum sulfur content of 0.05 percent must be used in the generator engines. The purpose of this requirement is to minimize SO_2 emissions, to reduce PM emissions, and to extend the service life of the catalytic exhaust emission reduction system.

117.b. Not later than January 1, 2002, the permittee must install an exhaust emission control system that is designed and certified to reduce emissions of PM, CO and VOC. This requirement has three purposes: to reduce emissions of PM, CO and VOC; to reduce the potential to create a nuisance condition; and to reduce the emissions of Hazardous Air Pollutants (HAPs). HAPs are present in both the PM and VOC, and by reducing emissions of these pollutants, HAP emissions are also reduced.

SUMMARY OF PSEL CHANGES AND NETTING BASIS

118. This facility was in operation during the Baseline Period (1977/78) and has a Baseline Emission Rate. For all pollutants except NOx, the netting basis is equal to the Baseline Emission Rate. On November 6, 2000, the facility received a PSD permit which authorized a higher level of NOx emissions. The netting basis for NOx is now equal to the NOx emission level authorized by the PSD permit. The following tables summarize the Baseline Emission Rate, the Netting Basis, the current PSELs and the proposed PSELs; and the emissions increases or decreases from the Netting Basis and unassigned PSEL.

Pollutant	Baseline Emission Rate	Netting Basis	Current PSEL	Proposed PSEL
	ton/yr	ton/yr	ton/yr	ton/yr
PM/PM_{10}	1669	1669	1486	1560
CO	6678	6678	1953	2480
NOx	1630	2165	1672	2165
SO_2	1880	1880	1256	1262
VOC	841	841	485	841
TRS	78	78	52	78
Pb	-	-	0.1	0.1

Pollutant	Netting Basis (NB)	Proposed PSEL	Increase (Decrease) from NB	Significant Emission Rate	Unassigned PSEL
	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr
PM/PM_{10}	1669	1560	(109)	25/15 *	109
CO	6678	2480	(4198)	100	4198
NOx	2165	2165	0	40	0
SO_2	1880	1262	(618)	40	618
VOC	841	819	(22)	40	22
TRS	78	78	0	10	0
Pb	-	0.1	0.1	0.6	0

* 25 for PM, 15 for PM_{10}

119. All PSEL increases above the Netting Basis are less than the Significant Emission Rate, and therefore may be approved without meeting any other requirements.

PUBLIC NOTICE

120. The permit was placed on public notice from April 12, 2002, through May 28, 2002. A public hearing was held on May 15, 2002.

RESPONSE TO COMMENTS

121. No oral comments were received at the hearing. Written comments were received from 2 persons.

Commenter 1

Mr. Hanson owns property adjacent to the mill. He commented that the mill produces an obnoxious odor that has not abated over the years. He also commented that particulate matter fallout occurs "quite often".

Response

Oregon's' rules require control of certain odorous gases (Non-Condensible Gases, or NCGs) and limit the emissions of odorous gases from miscellaneous sources. The mill is in compliance with these requirements. There may be some additional reduction of odorous emissions when the mill complies with the requirements of 40 CFR Part 63, Subpart S, which requires control of certain NCGs by April 17, 2006. Odorous emissions from this mill are similar to those of other Oregon mills, and we cannot require further reductions.

Particulate matter fallout has not been observed by Department staff; however, mill staff have stated that fallout may occur when the recovery furnace process or emission control system malfunctions. Malfunctions are not common and we have no reason to believe there is a chronic problem with these systems. The Department will continue to monitor this situation.

Commenter 2

Mr. Bouse is a mill employee and President of Pace International Union Local 8-1097. Mr. Bouse raised no issues and supported issuance of the permit.

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